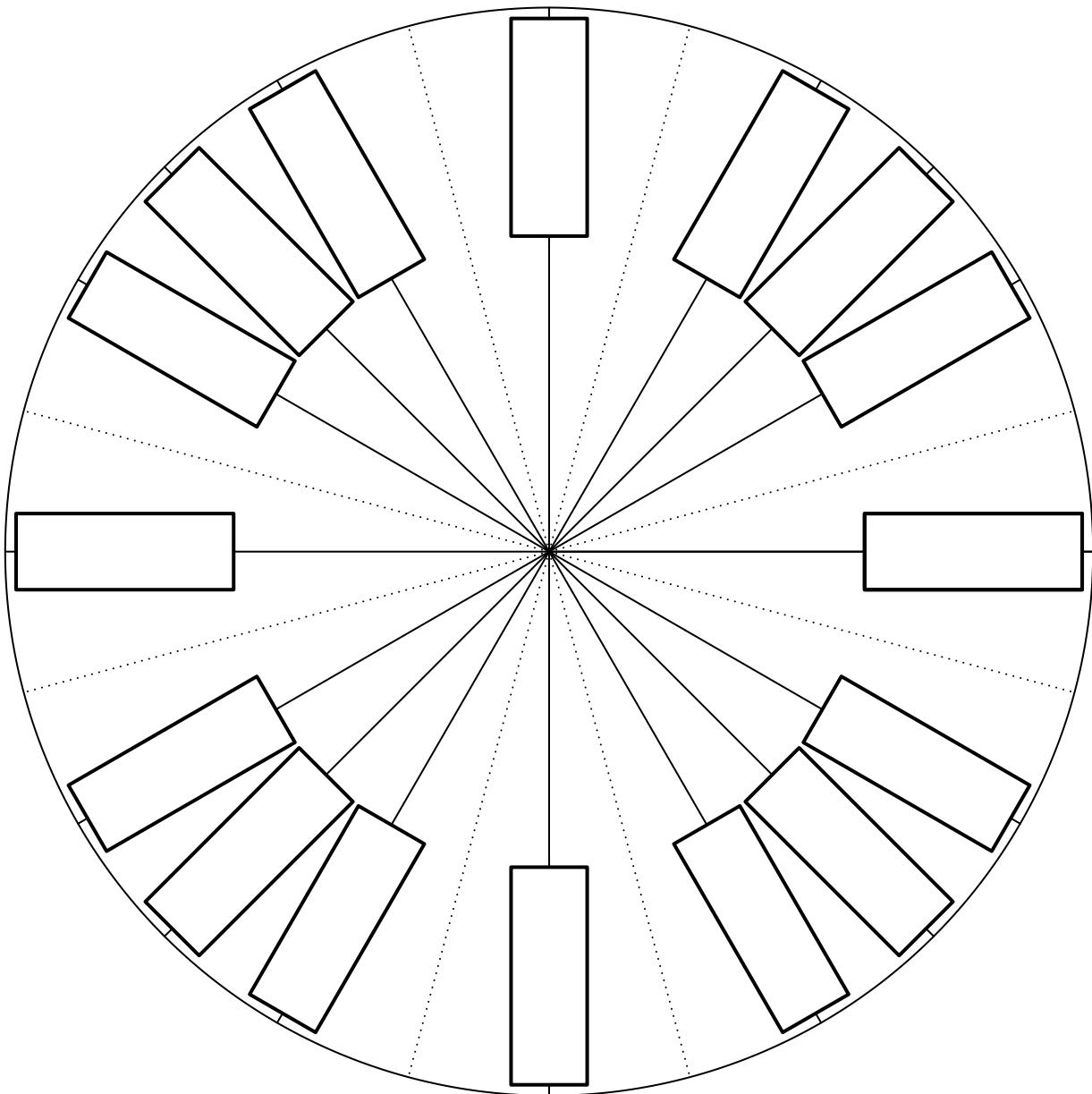


Name: _____

Date: _____

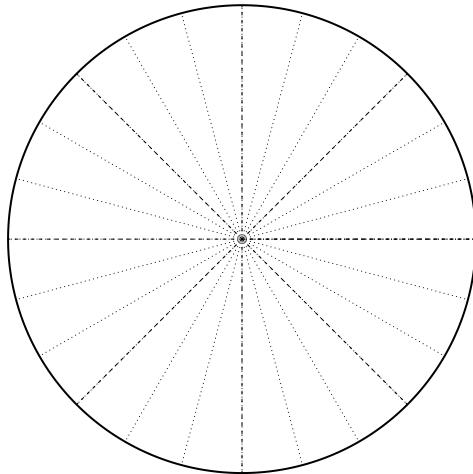
u12 Radians, Degrees, and Arc Length EXAM (version 100)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

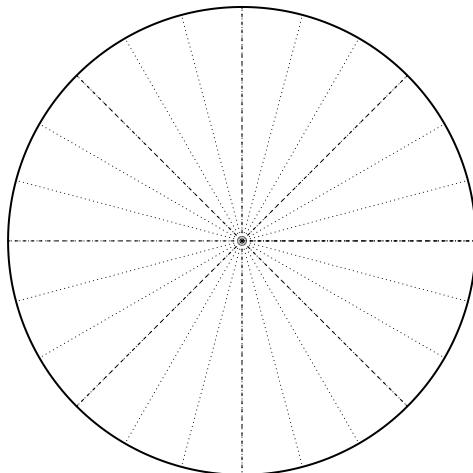


u12 Radians, Degrees, and Arc Length EXAM (version 100)

2. On the circle below, draw a sketch of a 870° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



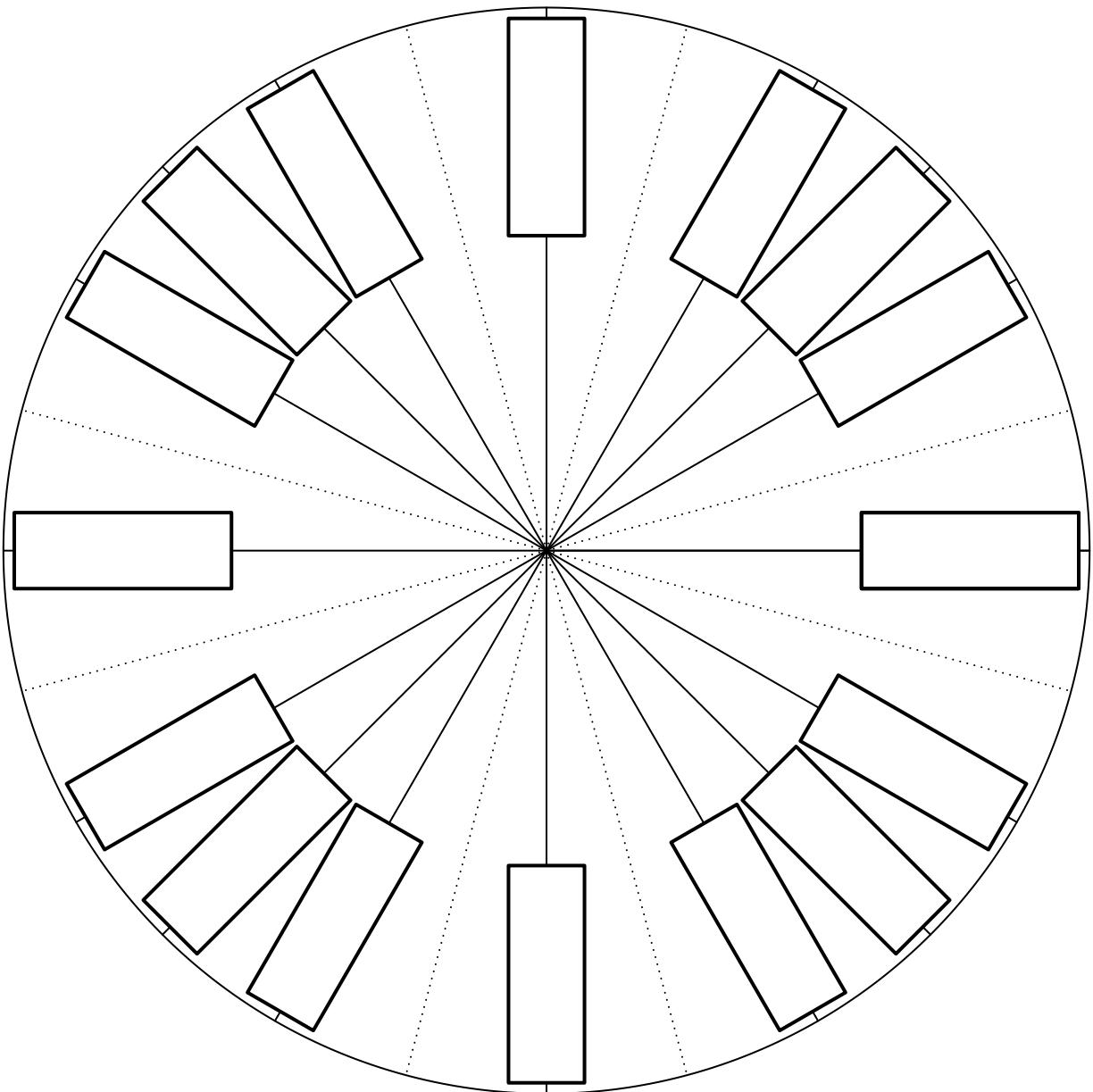
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 20 meters. Find θ .

Name: _____

Date: _____

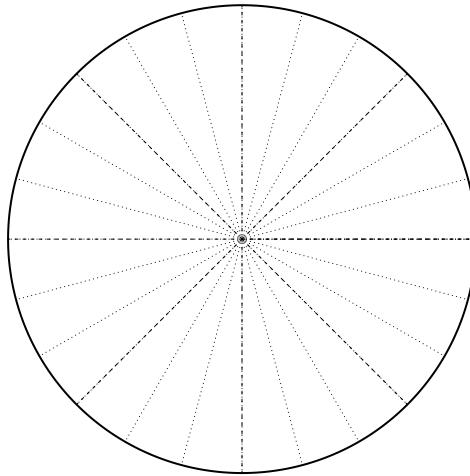
u12 Radians, Degrees, and Arc Length EXAM (version 101)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

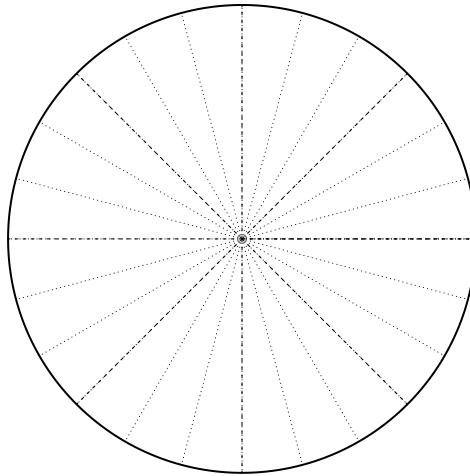


u12 Radians, Degrees, and Arc Length EXAM (version 101)

2. On the circle below, draw a sketch of a 585° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-41\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



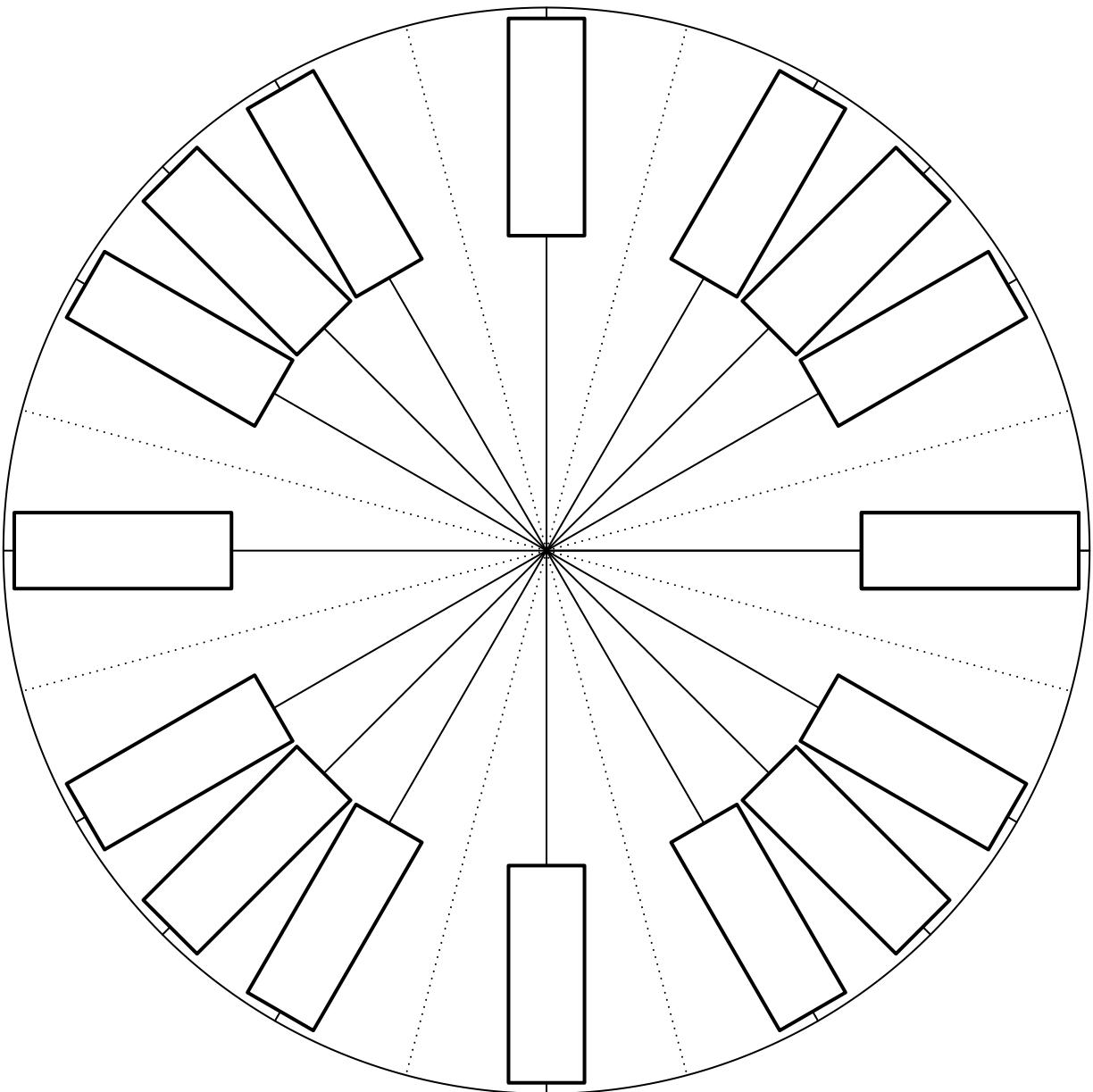
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 4 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

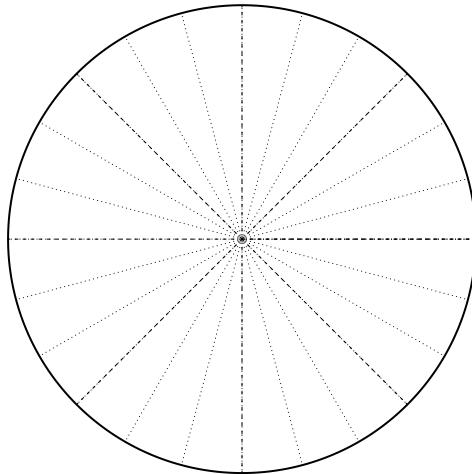
u12 Radians, Degrees, and Arc Length EXAM (version 102)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

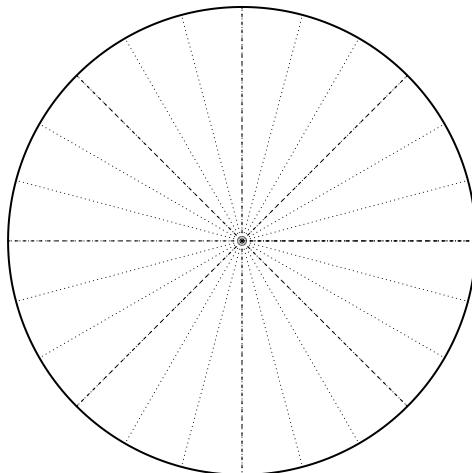


u12 Radians, Degrees, and Arc Length EXAM (version 102)

2. On the circle below, draw a sketch of a -1410° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{37\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



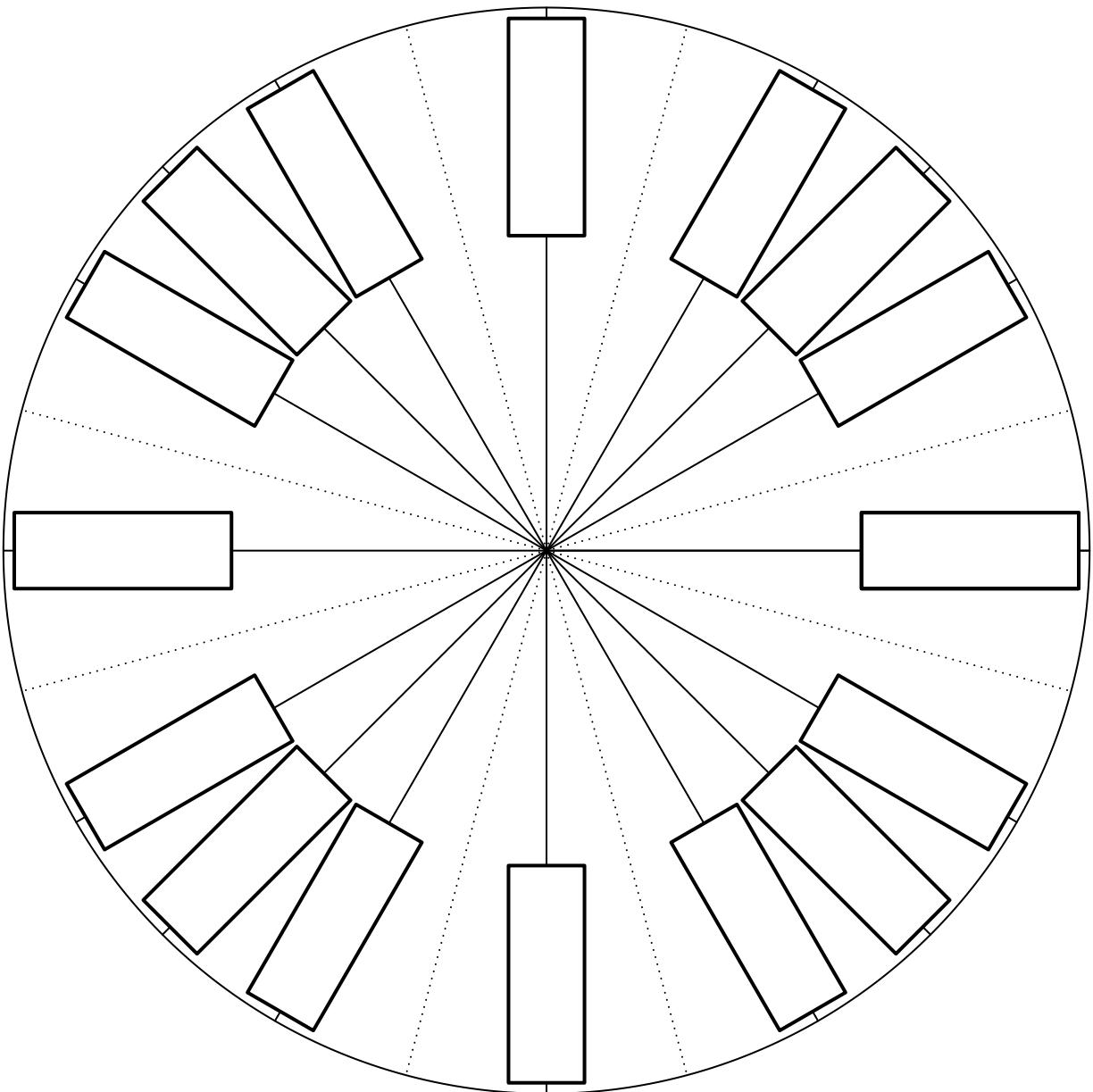
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

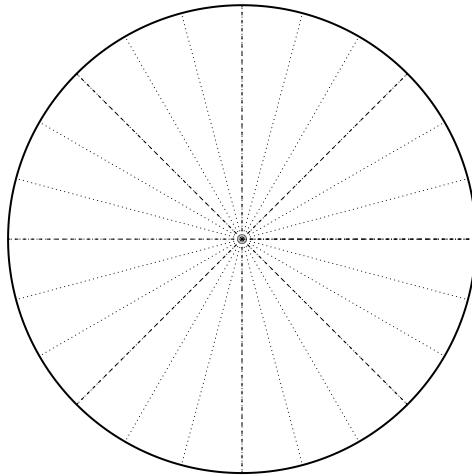
u12 Radians, Degrees, and Arc Length EXAM (version 103)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

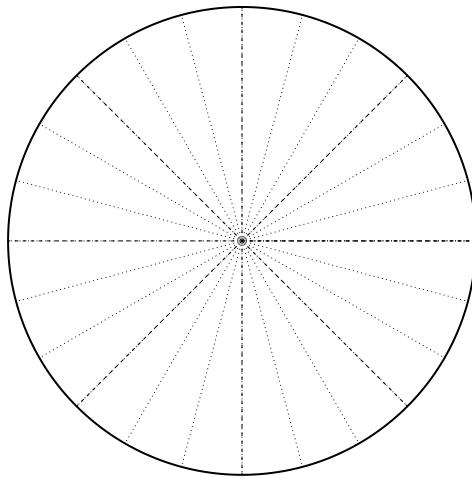


u12 Radians, Degrees, and Arc Length EXAM (version 103)

2. On the circle below, draw a sketch of a -1410° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{35\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



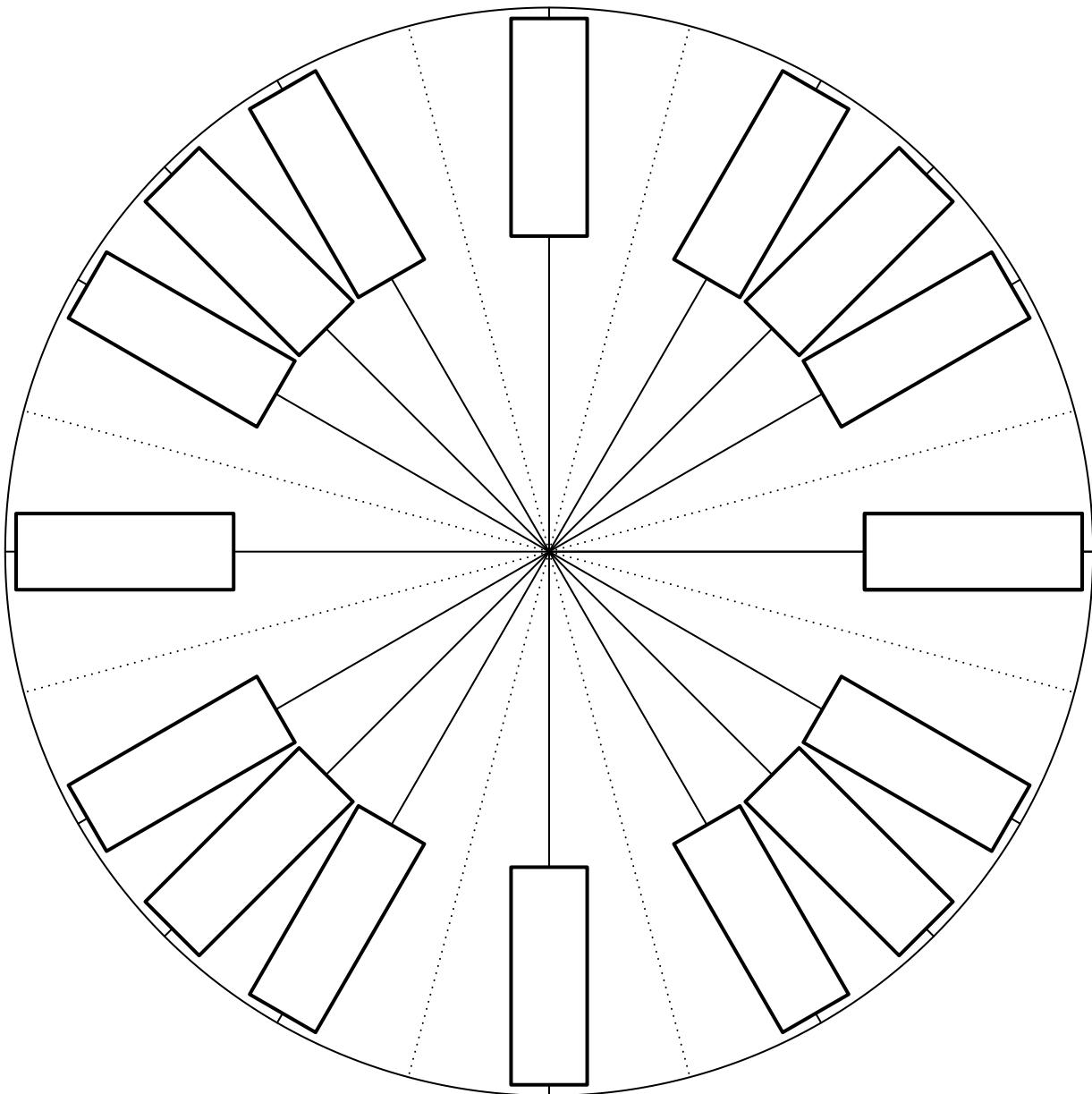
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 4 radians. The arc length equals 8 meters. Find r .

Name: _____

Date: _____

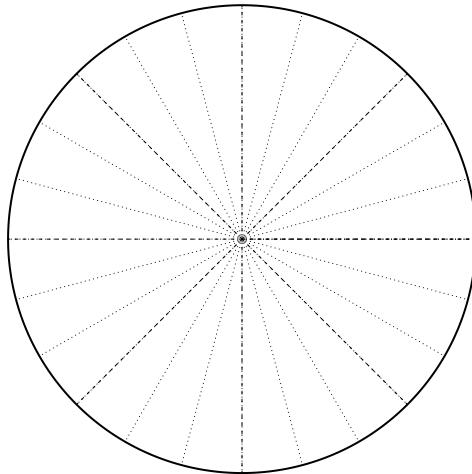
u12 Radians, Degrees, and Arc Length EXAM (version 104)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

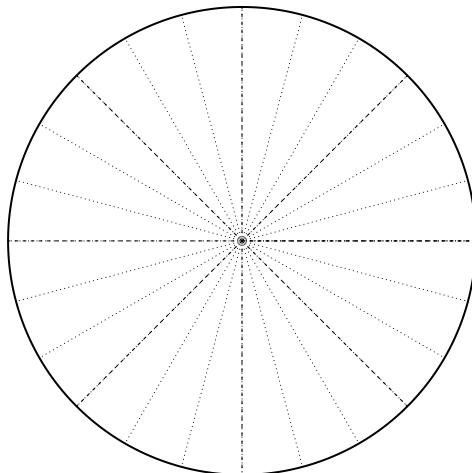


u12 Radians, Degrees, and Arc Length EXAM (version 104)

2. On the circle below, draw a sketch of a 420° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{17\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



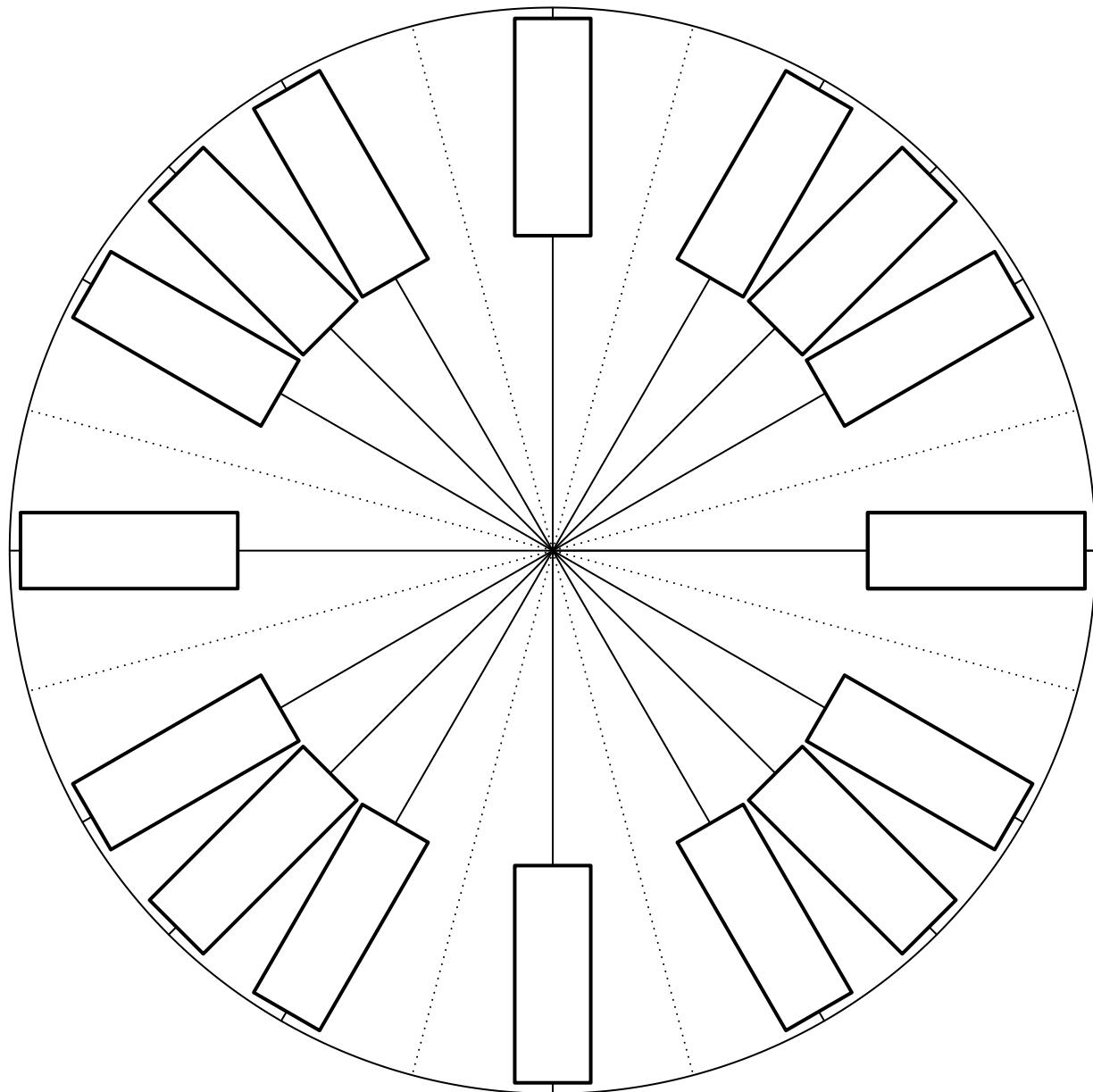
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

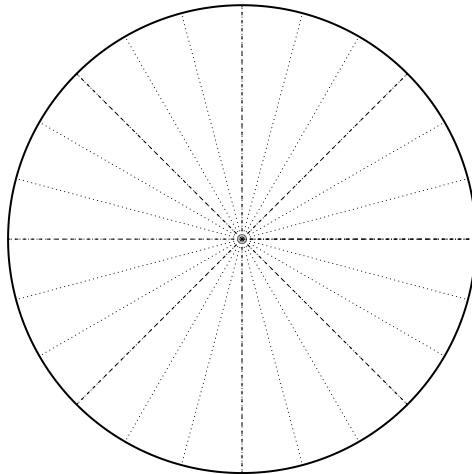
u12 Radians, Degrees, and Arc Length EXAM (version 105)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

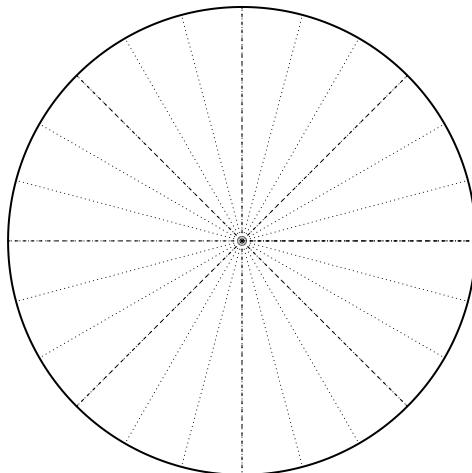


u12 Radians, Degrees, and Arc Length EXAM (version 105)

2. On the circle below, draw a sketch of a 405° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-25\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



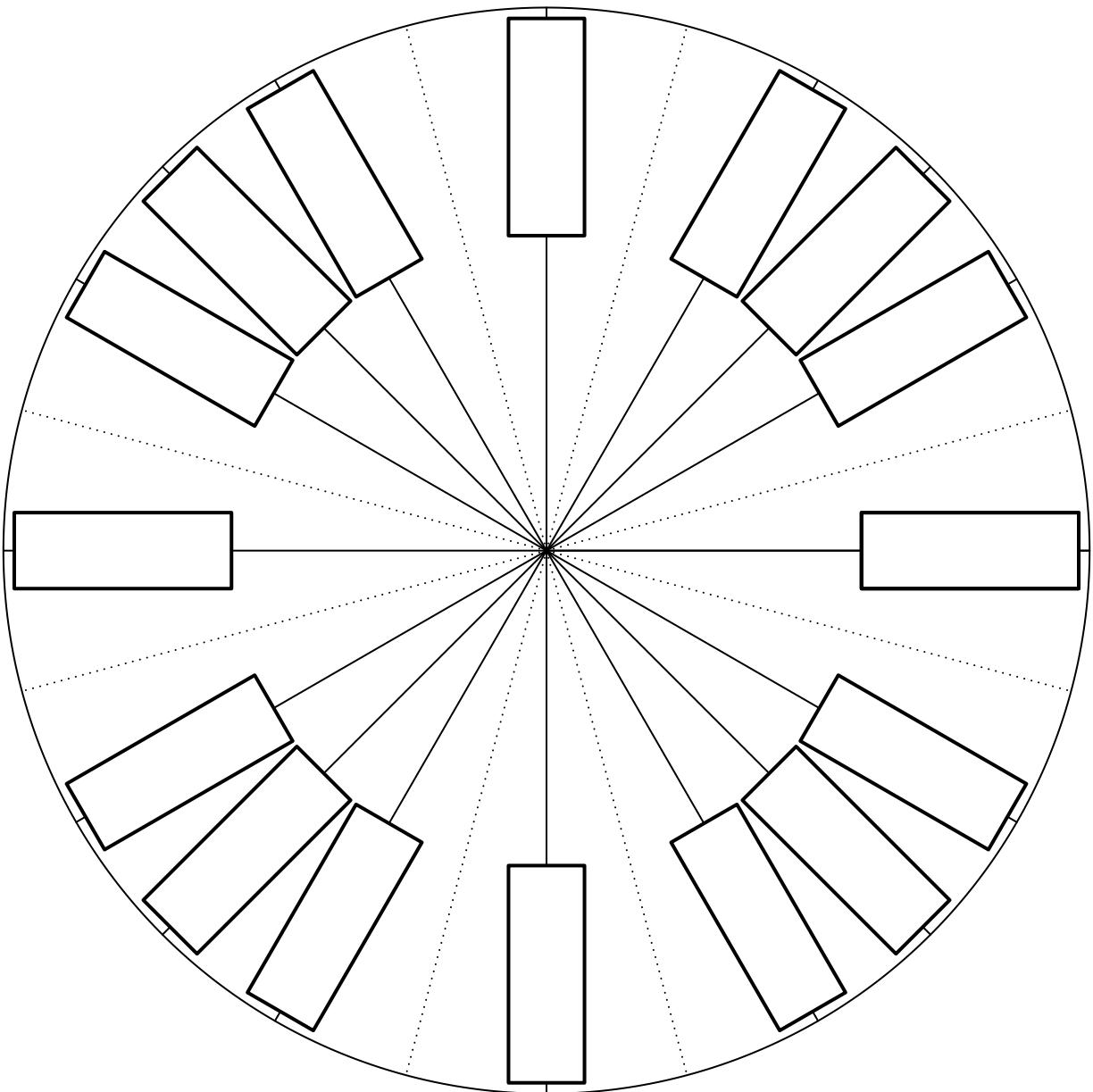
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals θ radians. The arc length equals 15 meters. Find θ .

Name: _____

Date: _____

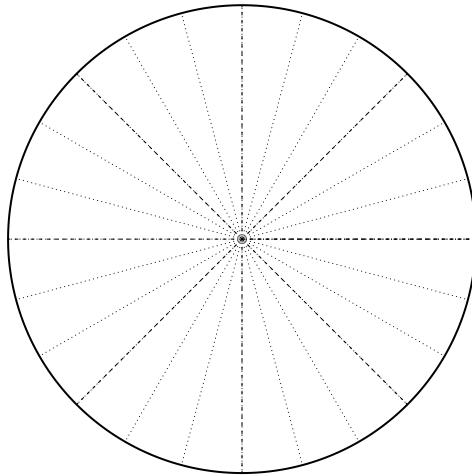
u12 Radians, Degrees, and Arc Length EXAM (version 106)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

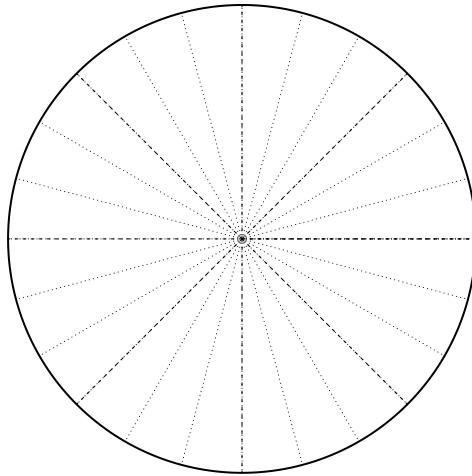


u12 Radians, Degrees, and Arc Length EXAM (version 106)

2. On the circle below, draw a sketch of a 690° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-9\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



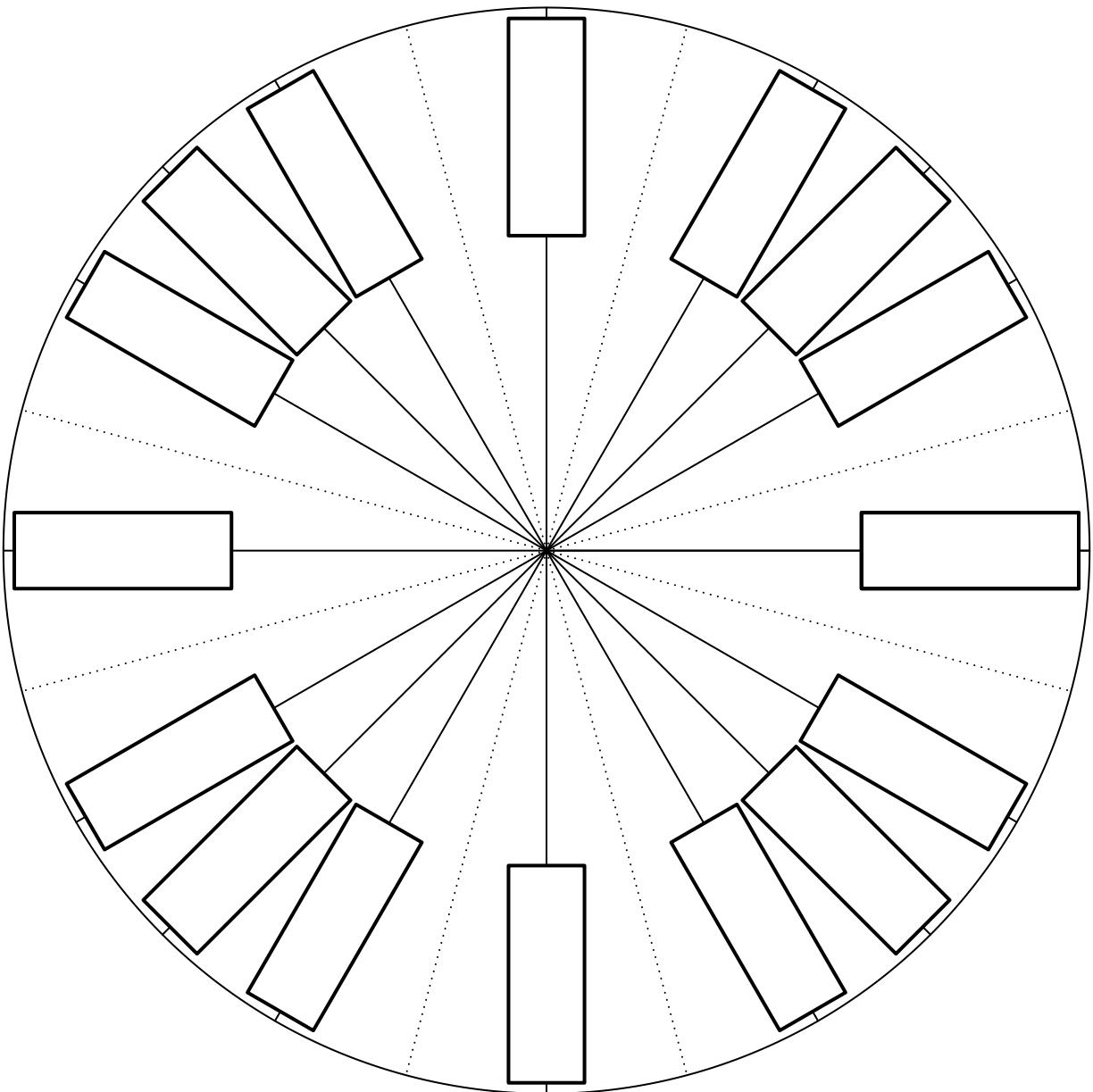
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 6 meters. Find r .

Name: _____

Date: _____

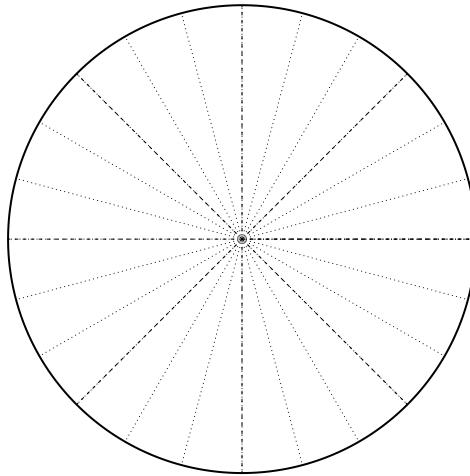
u12 Radians, Degrees, and Arc Length EXAM (version 107)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

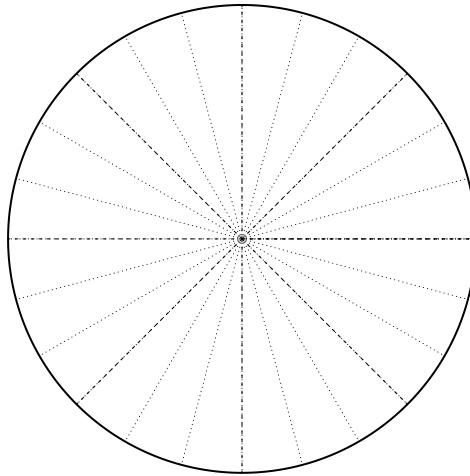


u12 Radians, Degrees, and Arc Length EXAM (version 107)

2. On the circle below, draw a sketch of a 1125° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{27\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



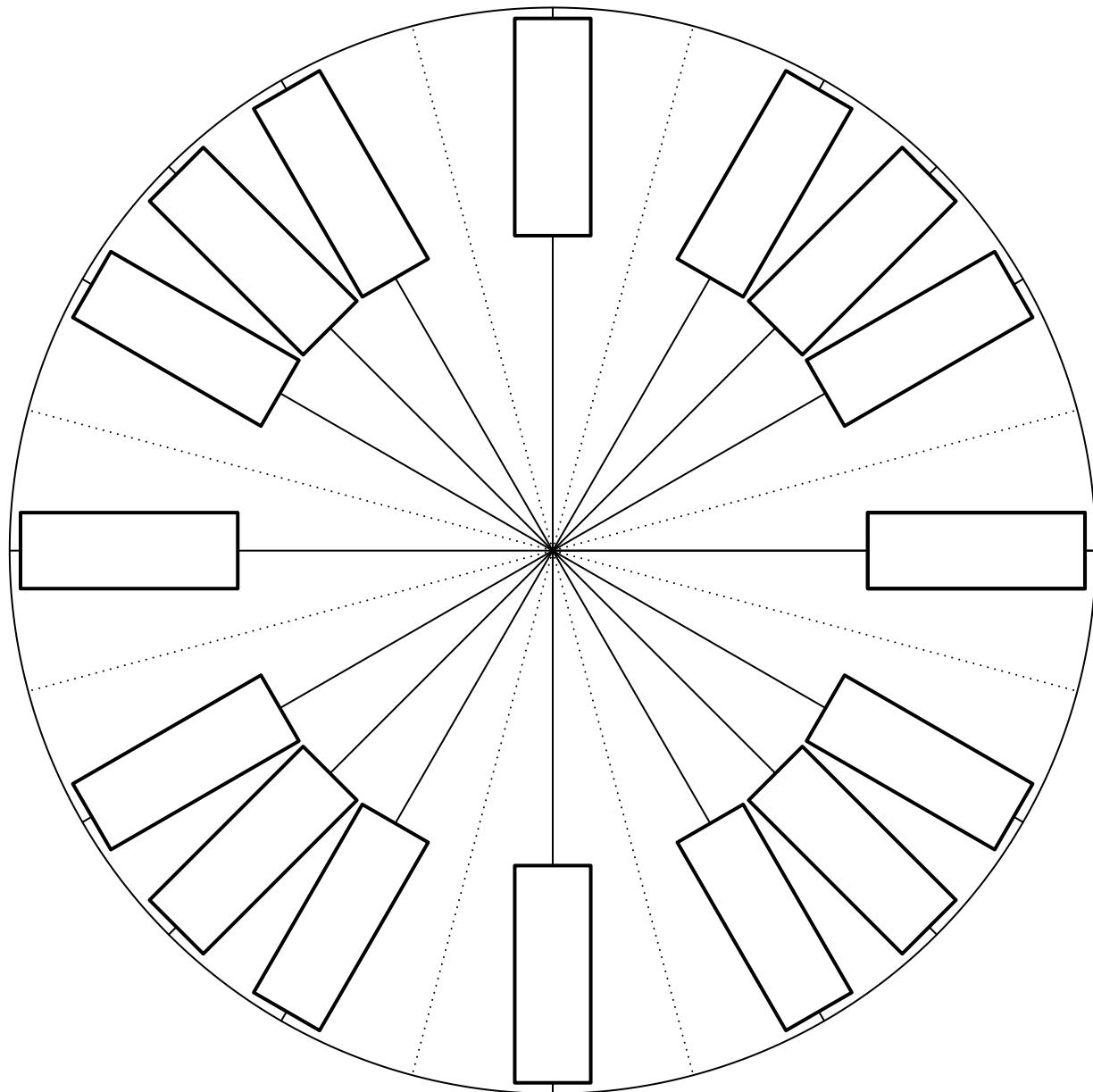
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

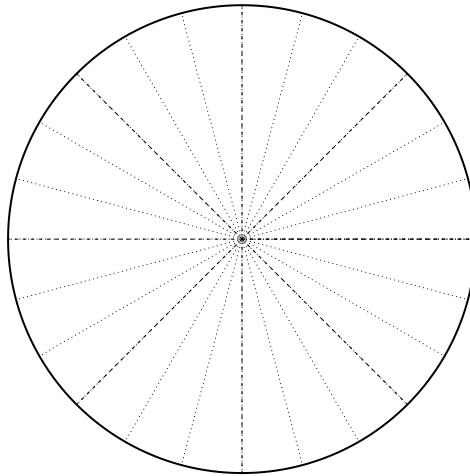
u12 Radians, Degrees, and Arc Length EXAM (version 108)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

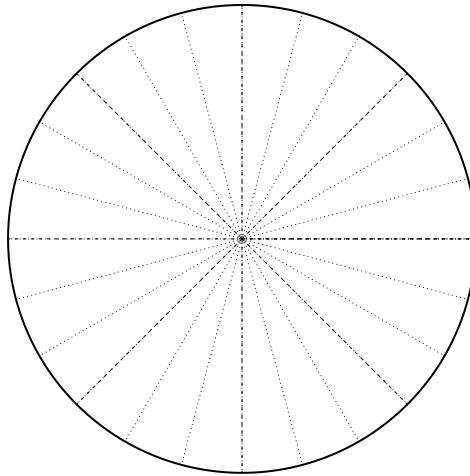


u12 Radians, Degrees, and Arc Length EXAM (version 108)

2. On the circle below, draw a sketch of a -1320° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-31\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



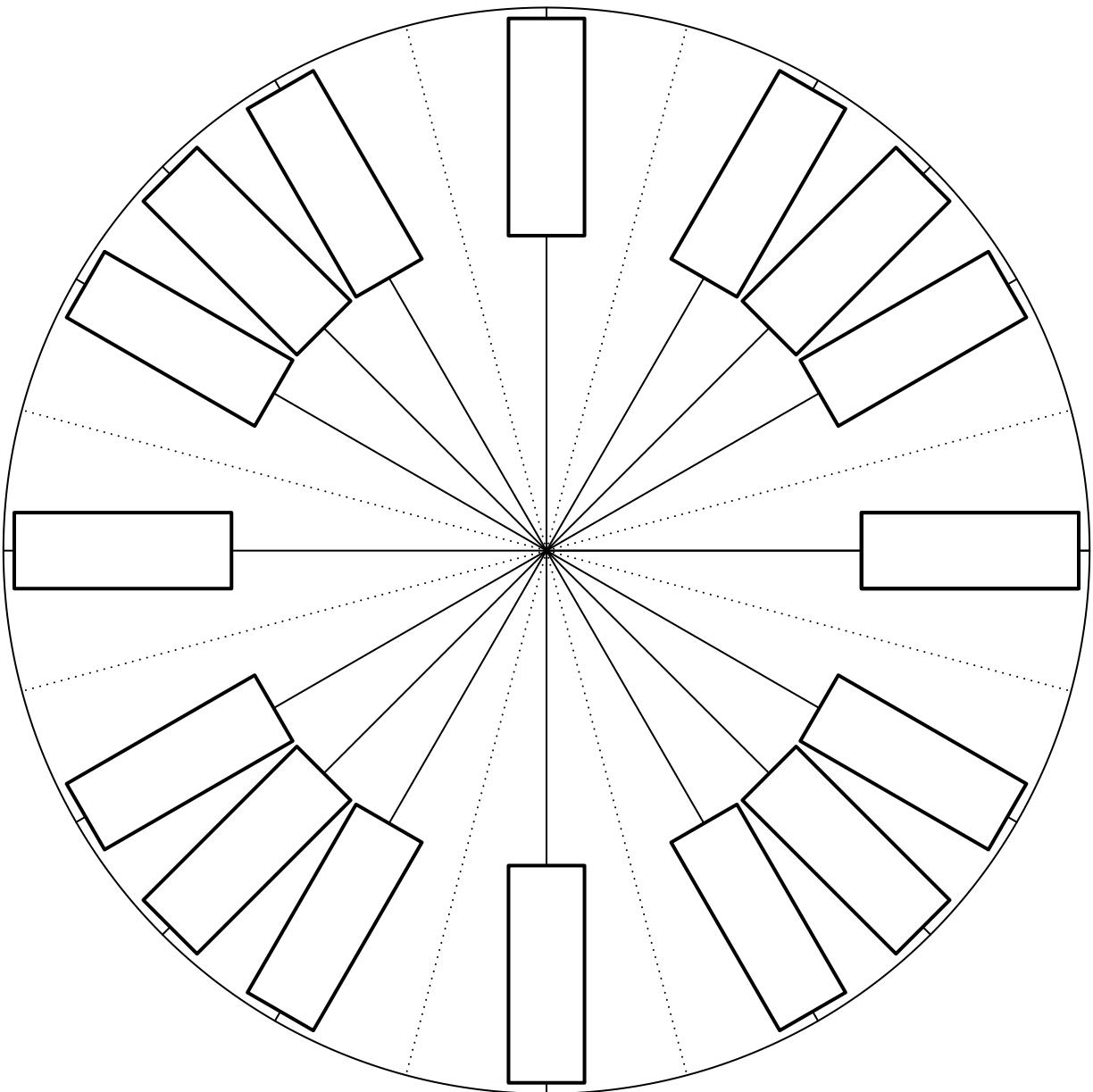
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

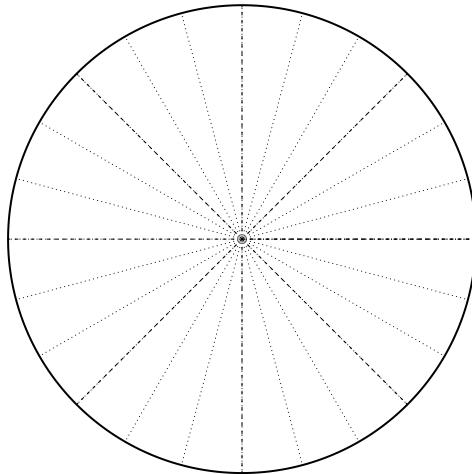
u12 Radians, Degrees, and Arc Length EXAM (version 109)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

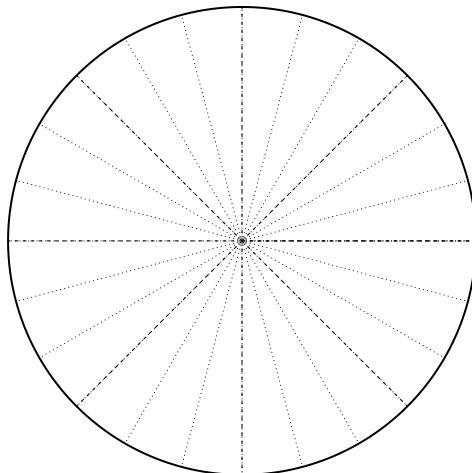


u12 Radians, Degrees, and Arc Length EXAM (version 109)

2. On the circle below, draw a sketch of a 570° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-21\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



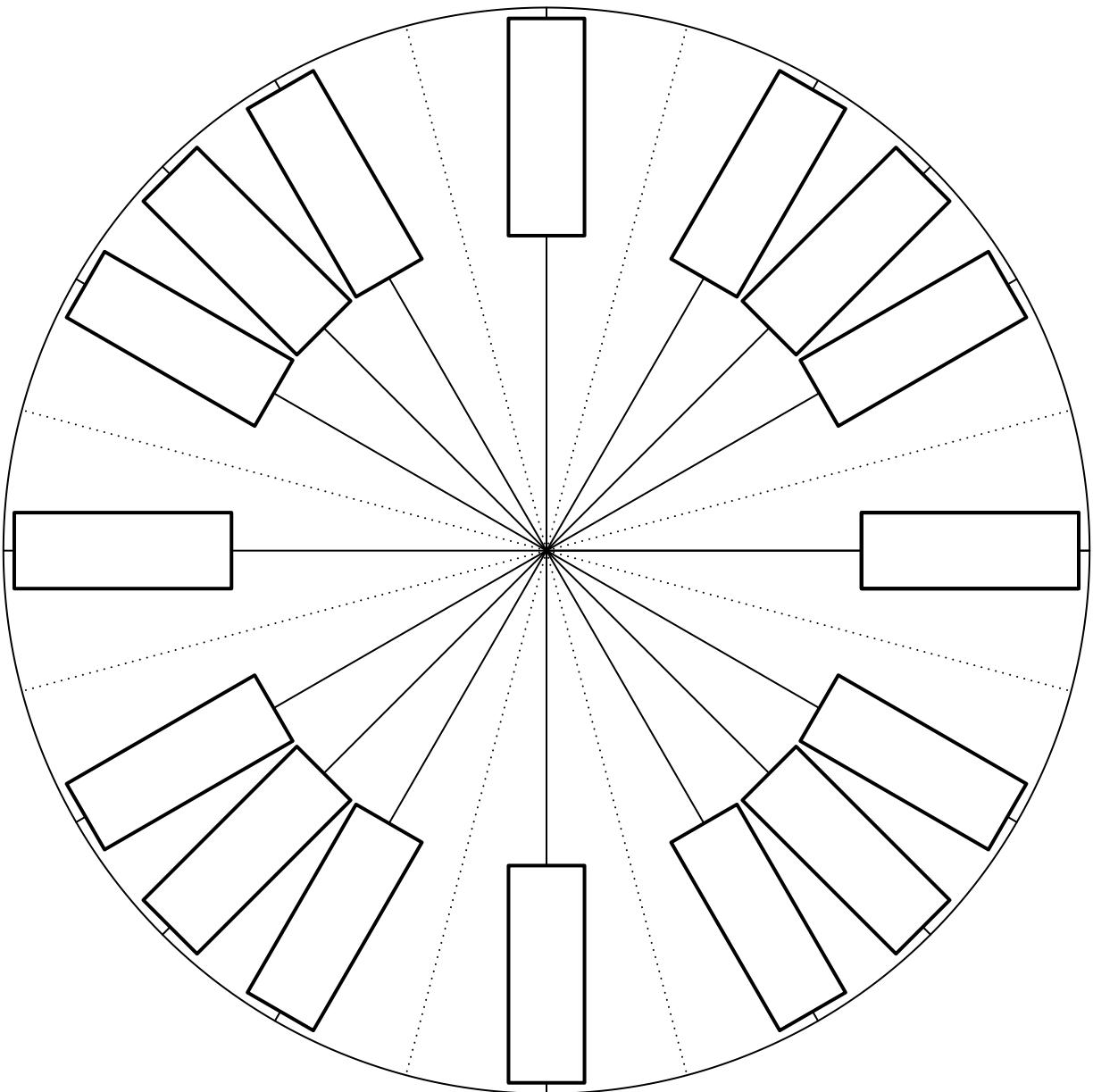
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 6 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

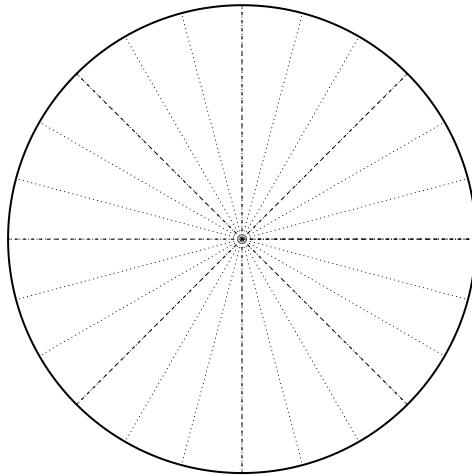
u12 Radians, Degrees, and Arc Length EXAM (version 110)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

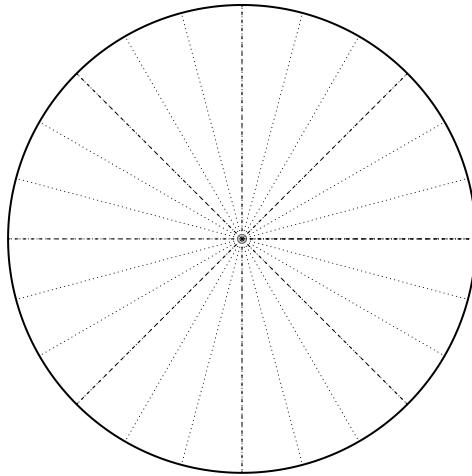


u12 Radians, Degrees, and Arc Length EXAM (version 110)

2. On the circle below, draw a sketch of a -780° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-19\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



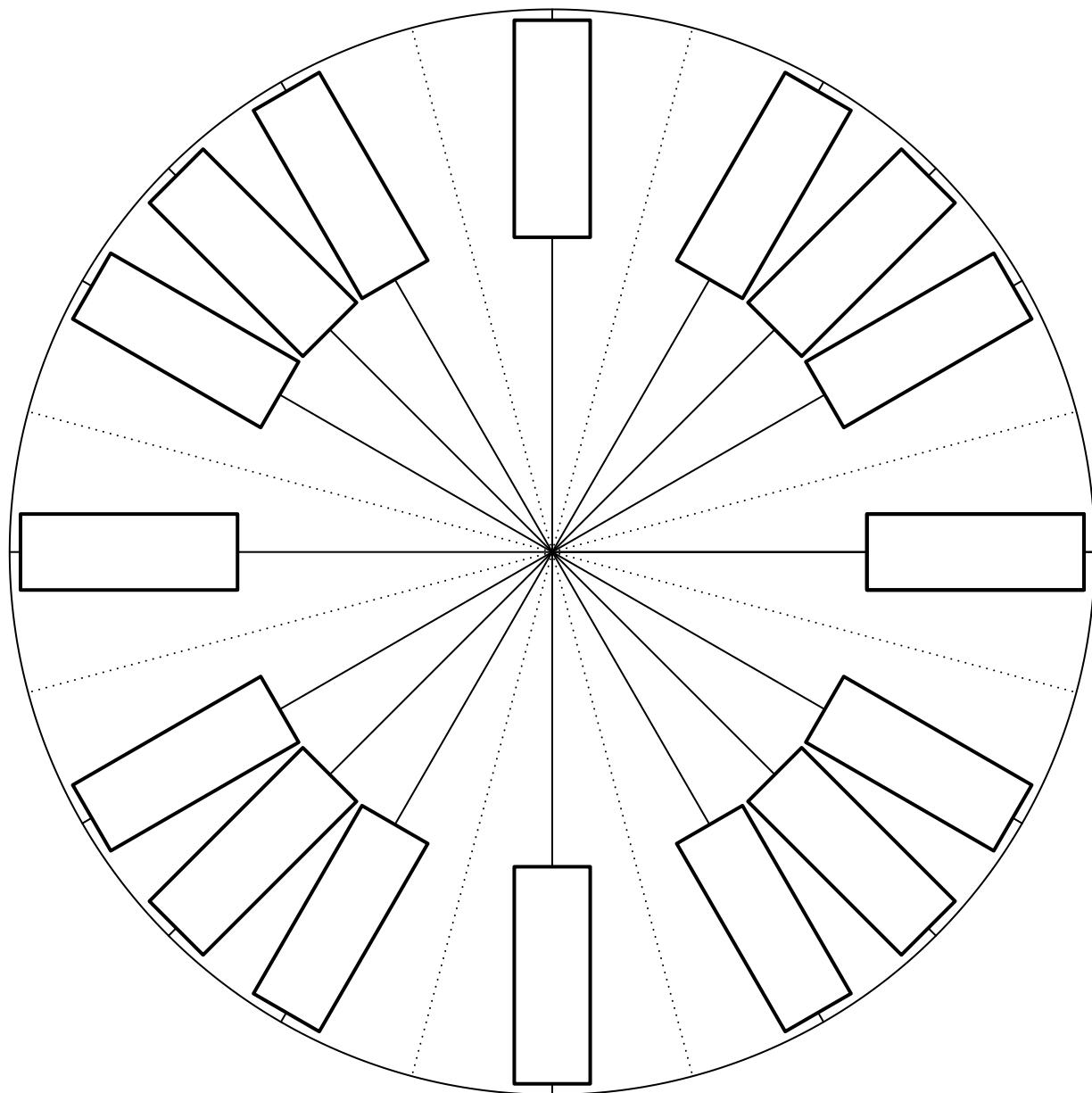
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

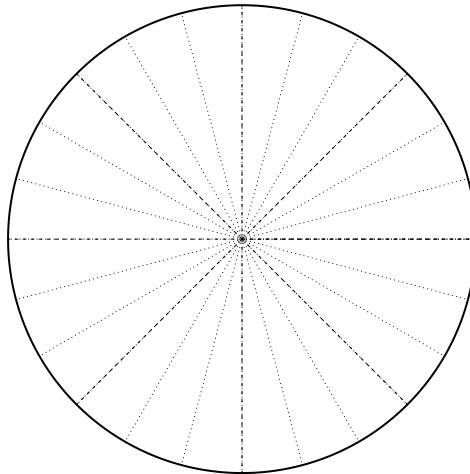
u12 Radians, Degrees, and Arc Length EXAM (version 111)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

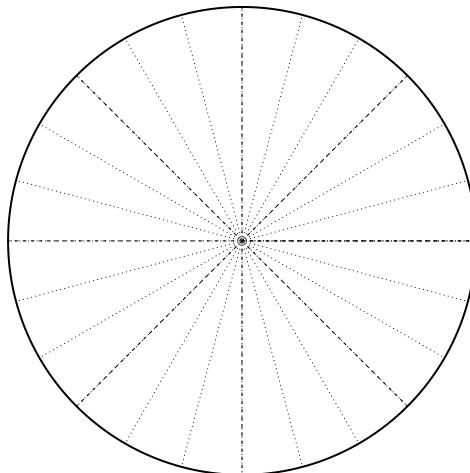


u12 Radians, Degrees, and Arc Length EXAM (version 111)

2. On the circle below, draw a sketch of a 990° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



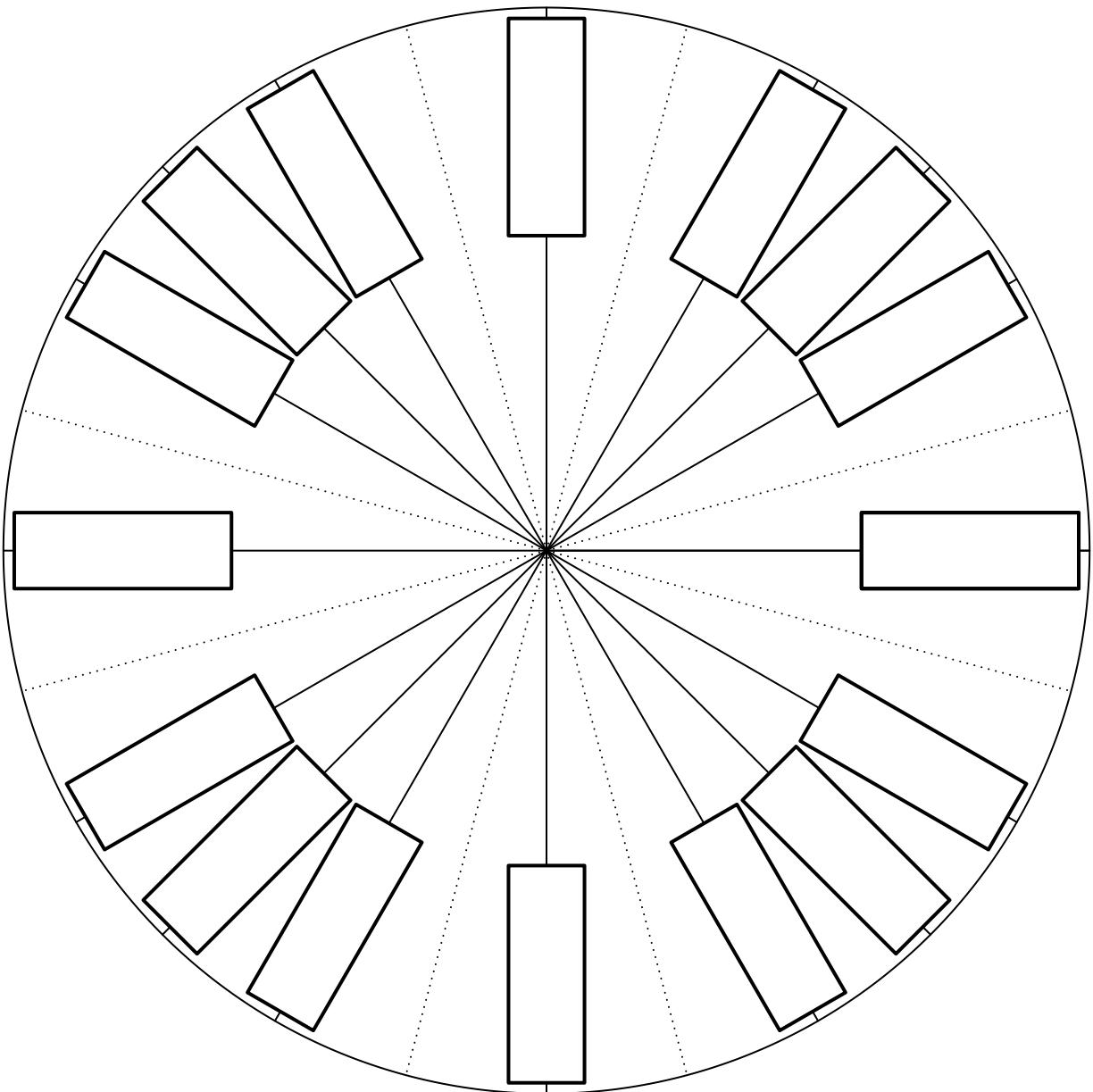
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals θ radians. The arc length equals 24 meters. Find θ .

Name: _____

Date: _____

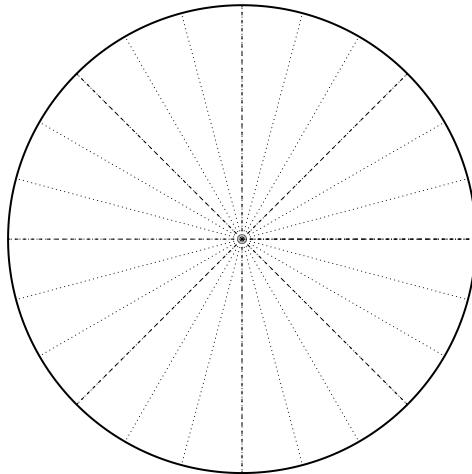
u12 Radians, Degrees, and Arc Length EXAM (version 112)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

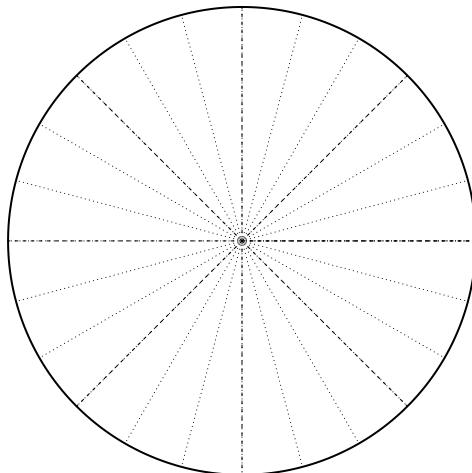


u12 Radians, Degrees, and Arc Length EXAM (version 112)

2. On the circle below, draw a sketch of a 960° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



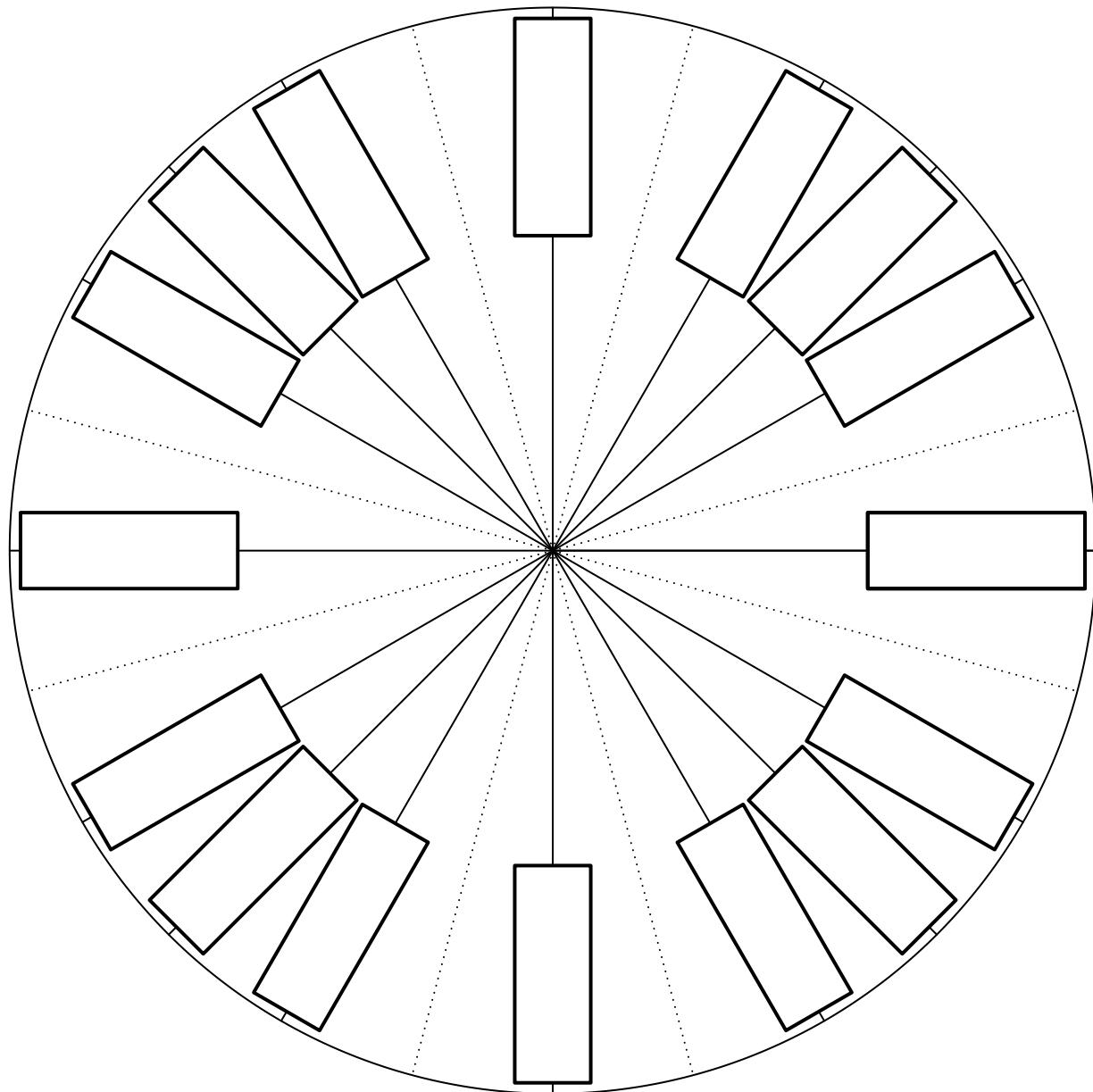
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

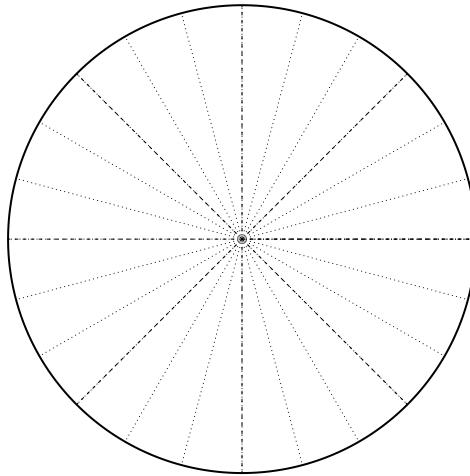
u12 Radians, Degrees, and Arc Length EXAM (version 113)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

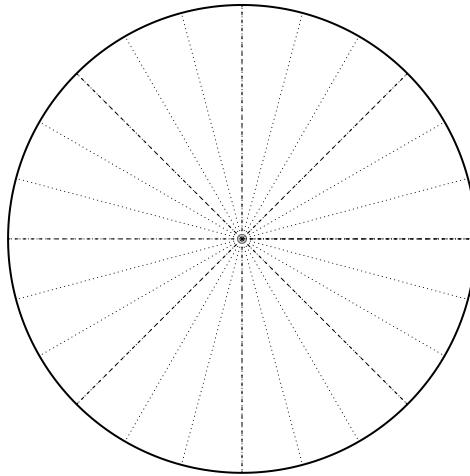


u12 Radians, Degrees, and Arc Length EXAM (version 113)

2. On the circle below, draw a sketch of a -600° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-13\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



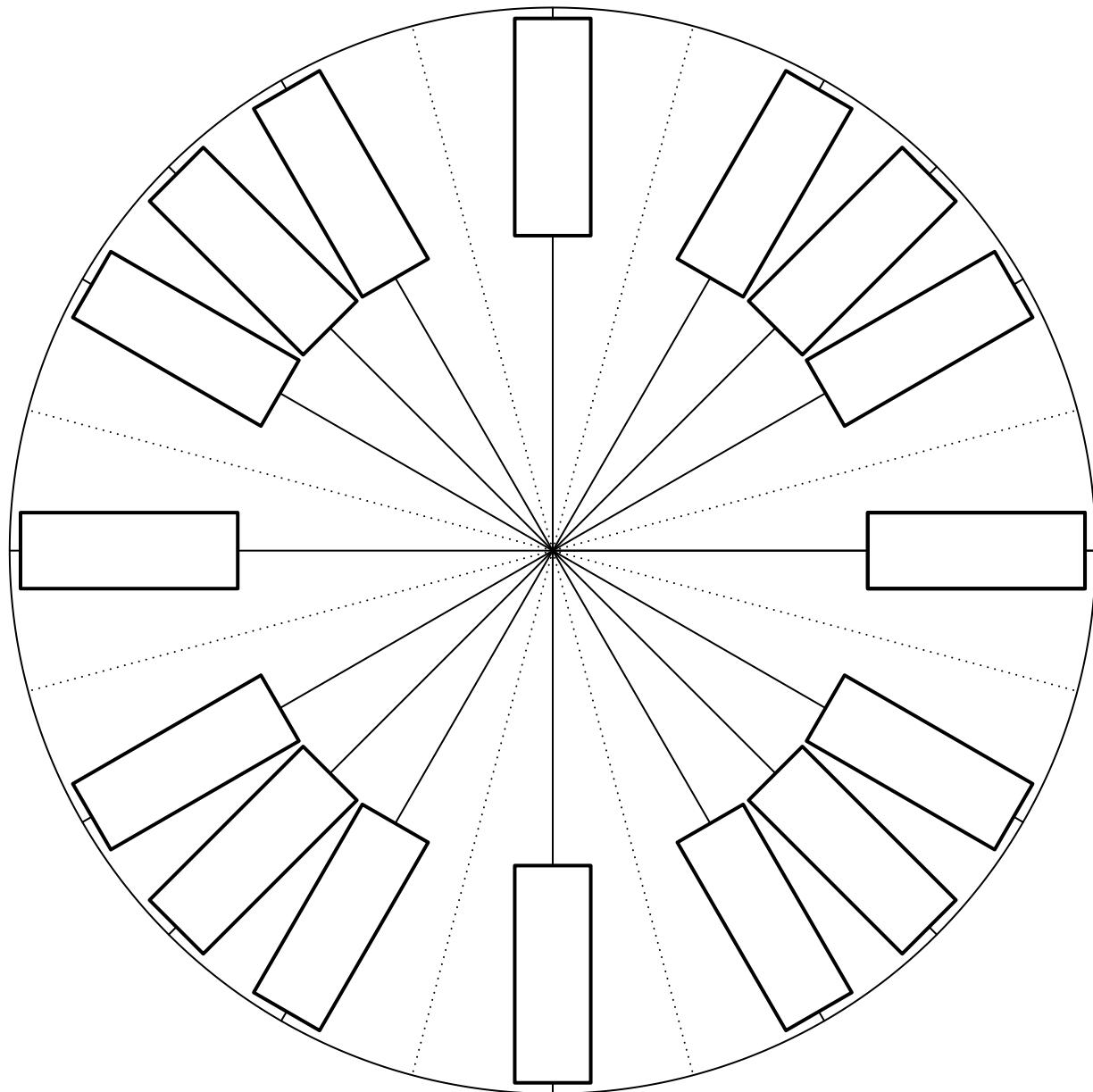
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

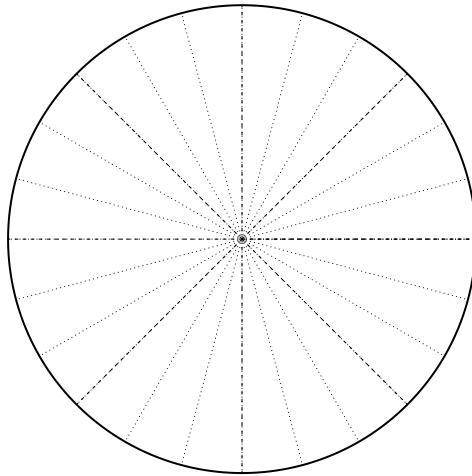
u12 Radians, Degrees, and Arc Length EXAM (version 114)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

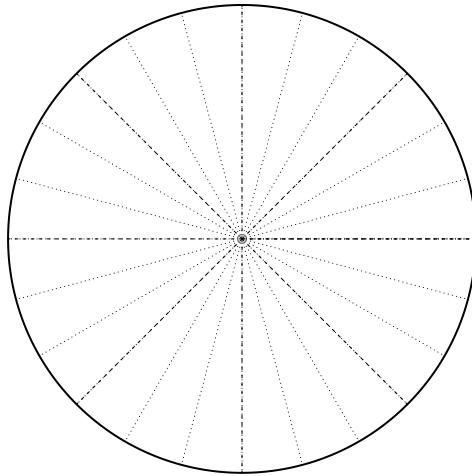


u12 Radians, Degrees, and Arc Length EXAM (version 114)

2. On the circle below, draw a sketch of a -855° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{15\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



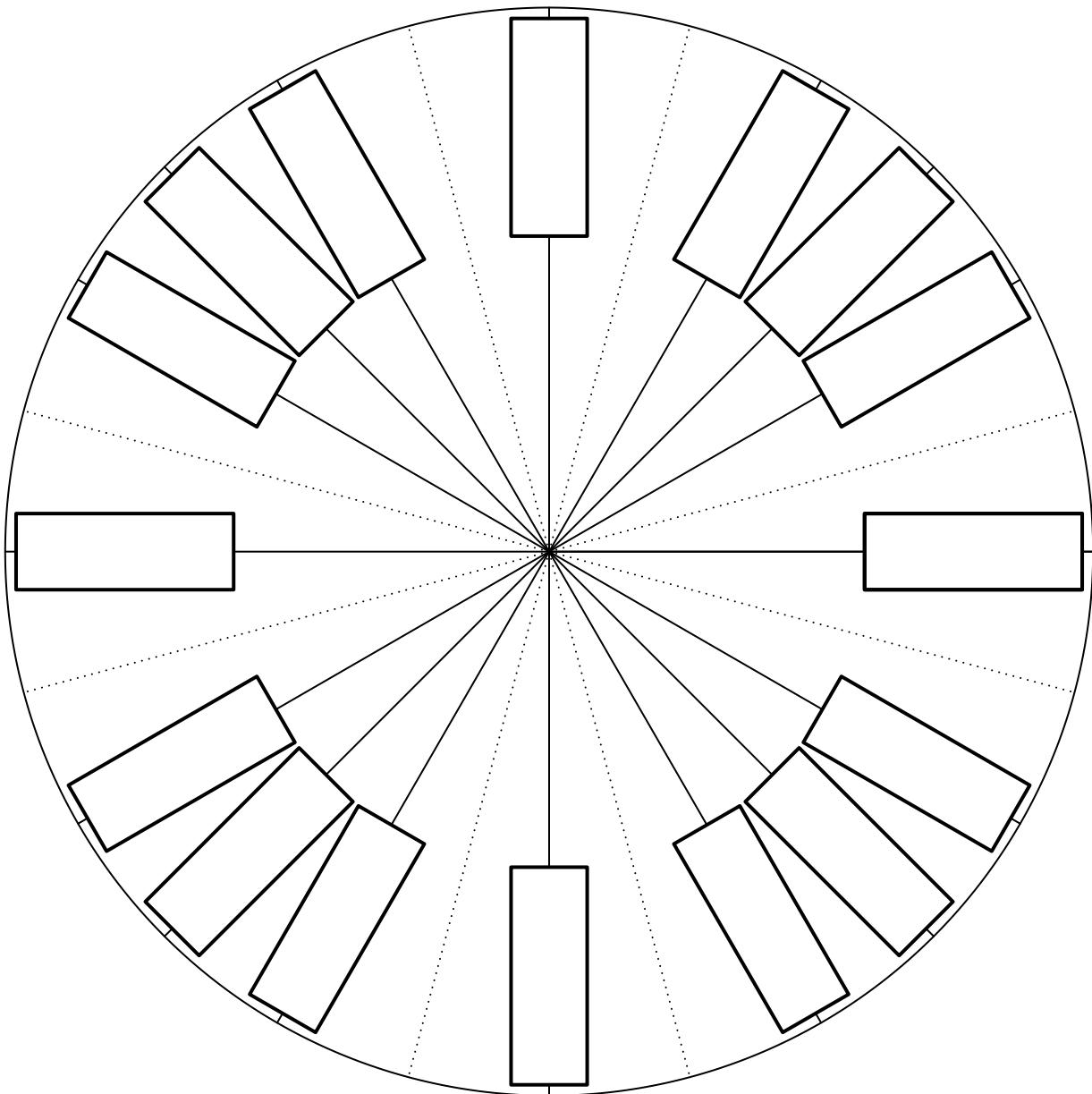
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals θ radians. The arc length equals 24 meters. Find θ .

Name: _____

Date: _____

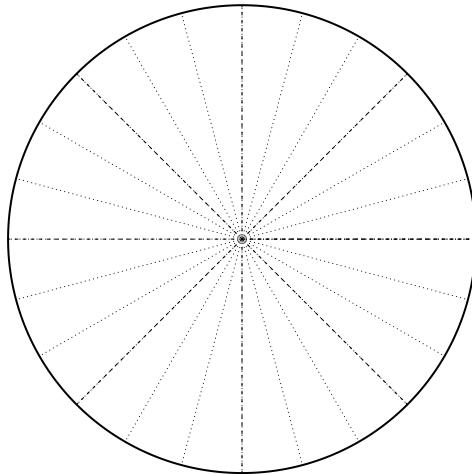
u12 Radians, Degrees, and Arc Length EXAM (version 115)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

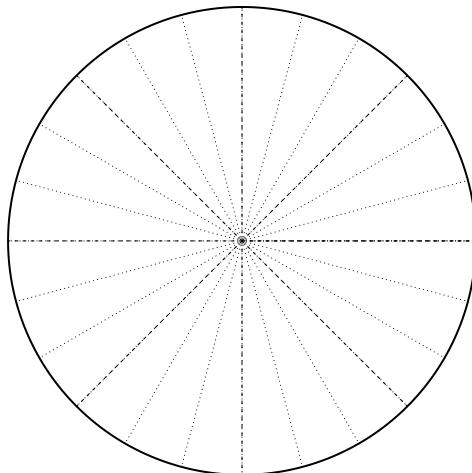


u12 Radians, Degrees, and Arc Length EXAM (version 115)

2. On the circle below, draw a sketch of a -1410° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-17\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



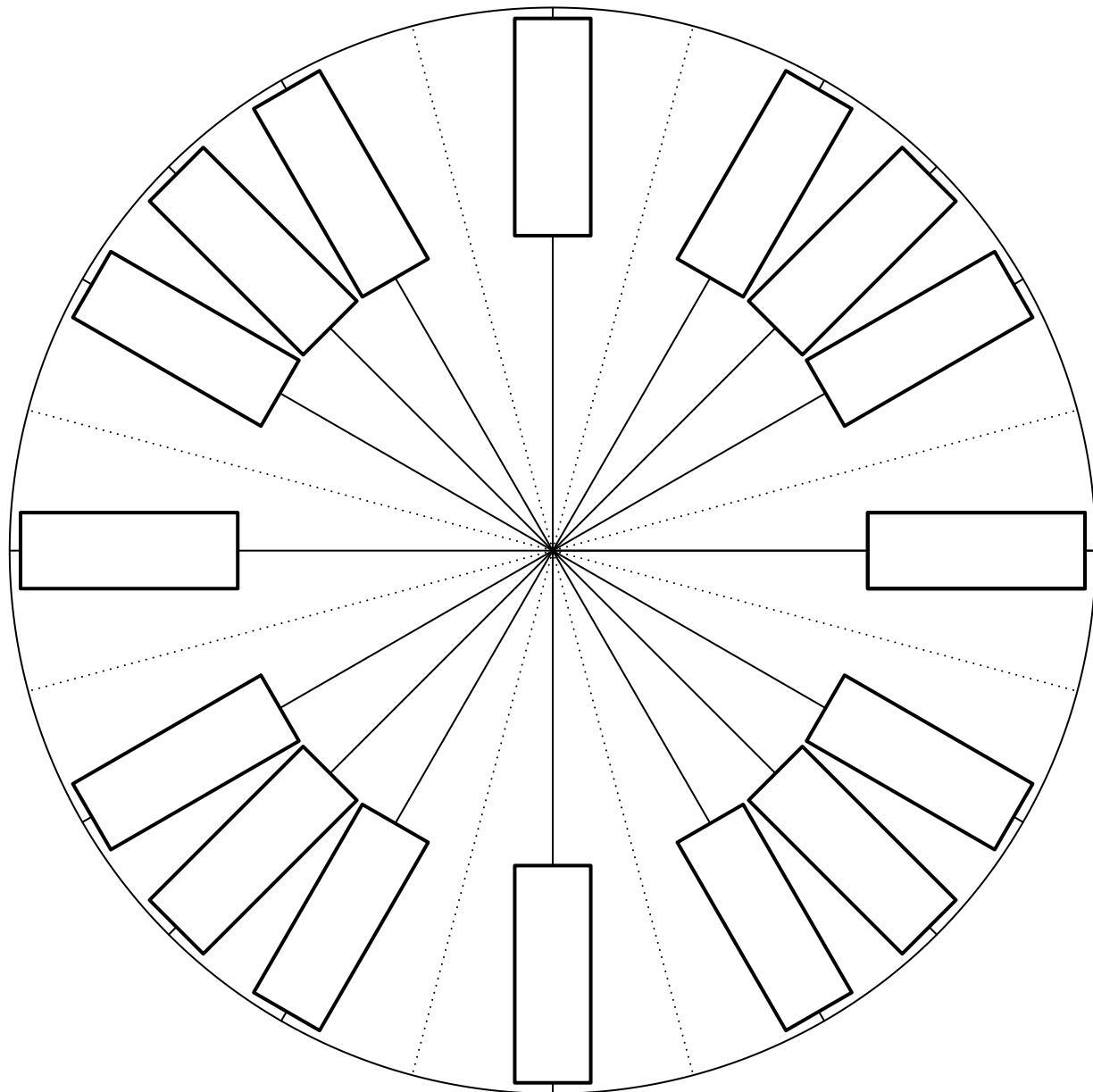
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals θ radians. The arc length equals 6 meters. Find θ .

Name: _____

Date: _____

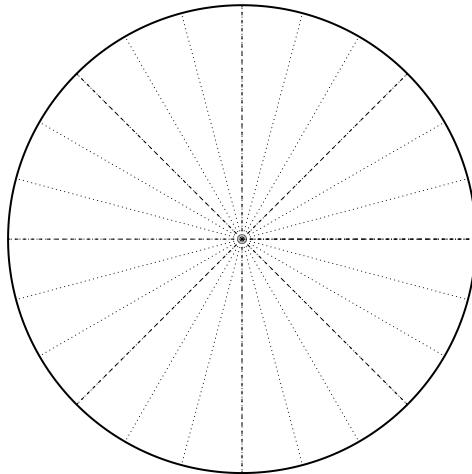
u12 Radians, Degrees, and Arc Length EXAM (version 116)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

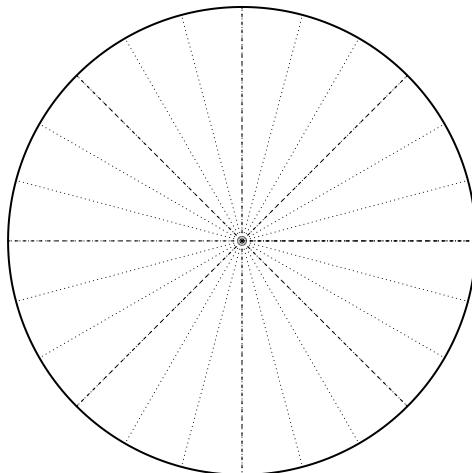


u12 Radians, Degrees, and Arc Length EXAM (version 116)

2. On the circle below, draw a sketch of a 1200° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{5\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



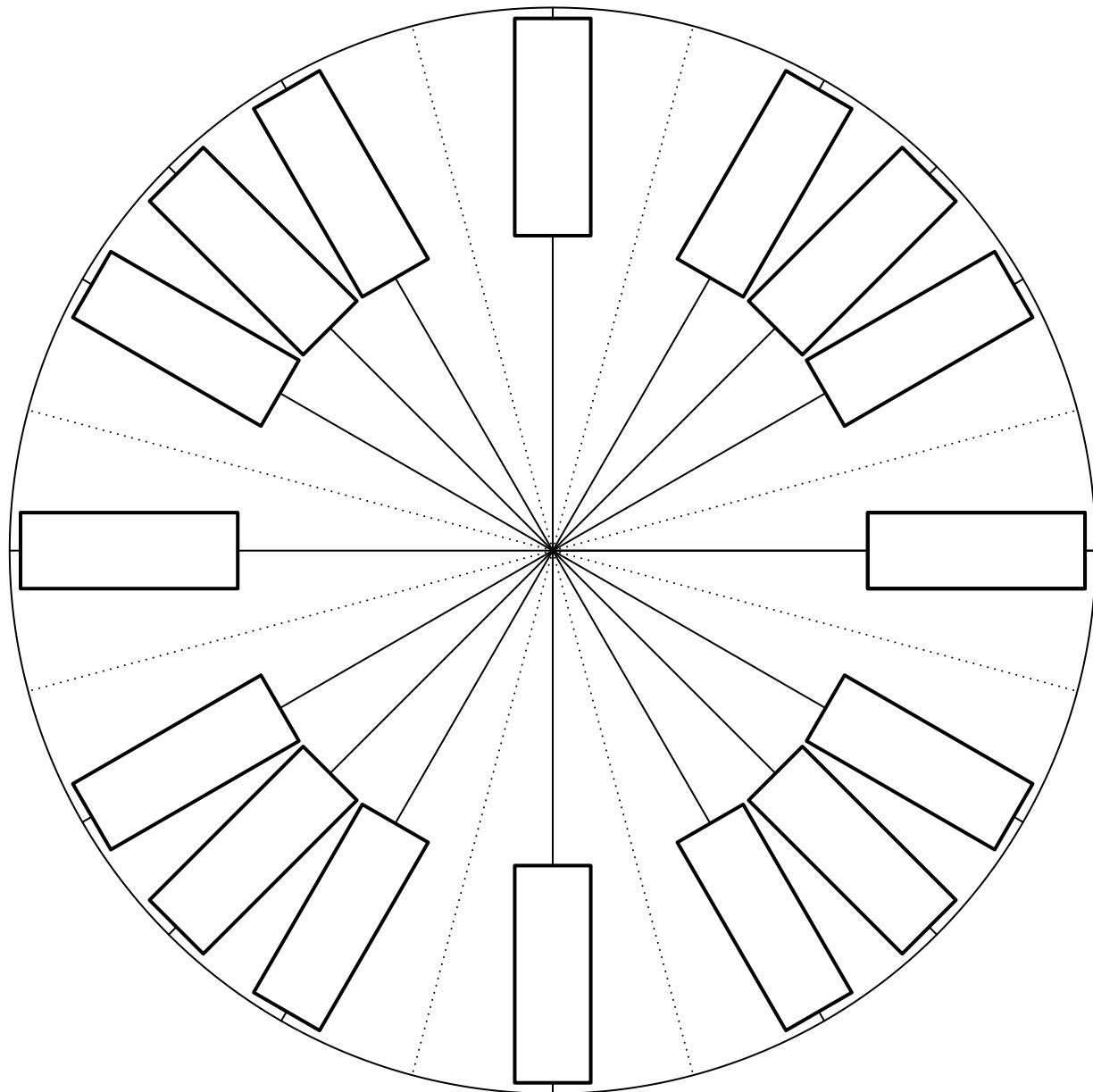
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

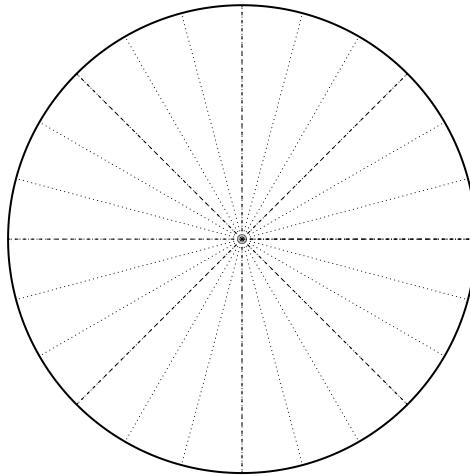
u12 Radians, Degrees, and Arc Length EXAM (version 117)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

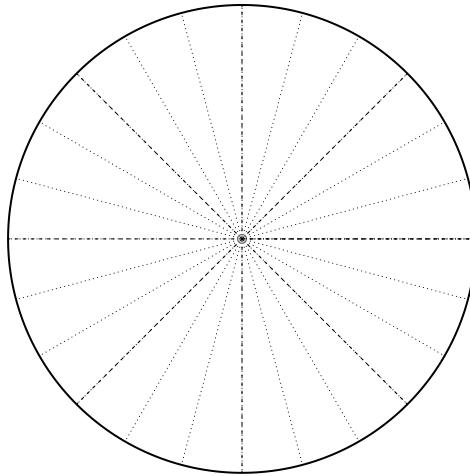


u12 Radians, Degrees, and Arc Length EXAM (version 117)

2. On the circle below, draw a sketch of a -1410° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-19\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



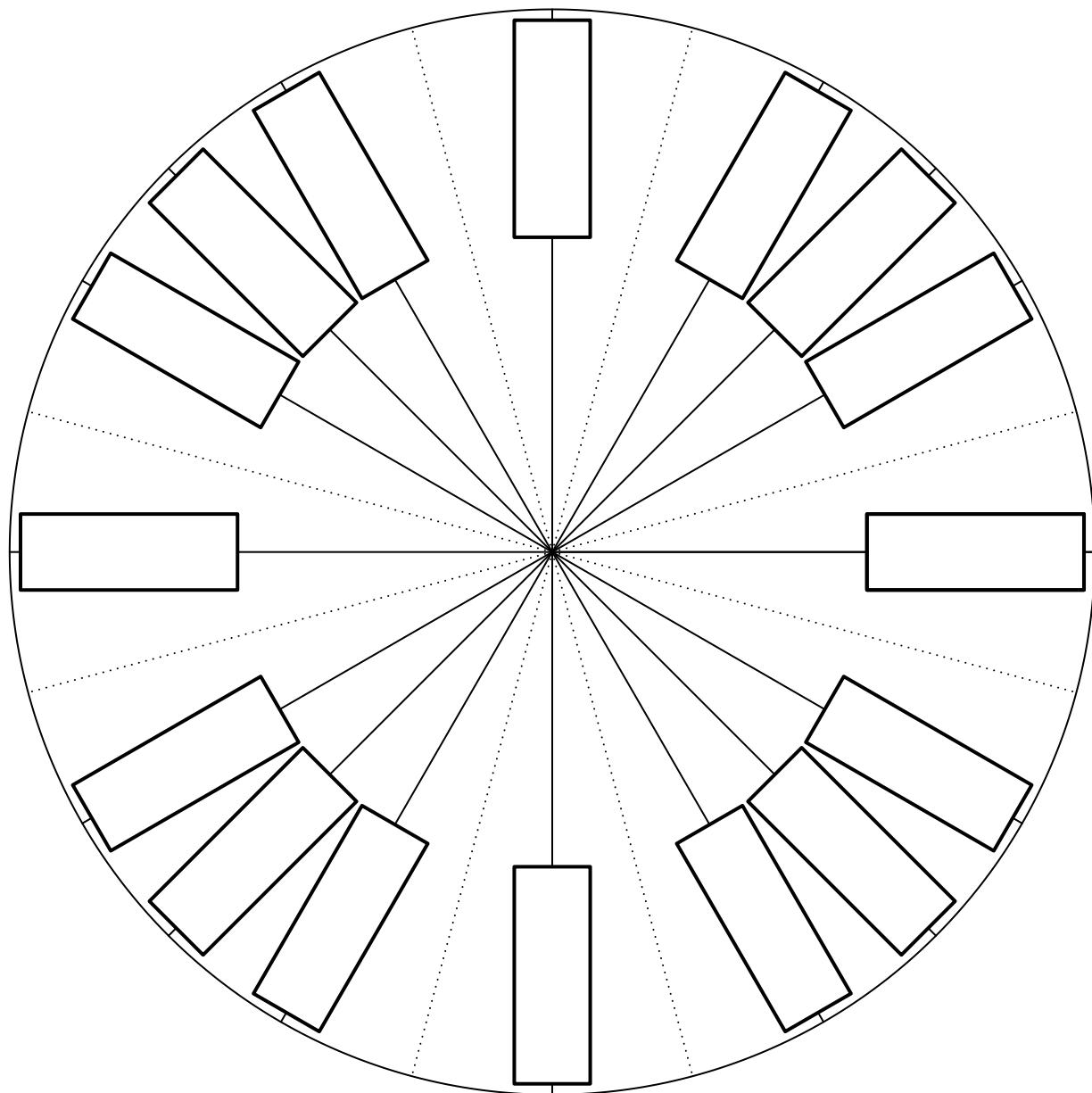
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

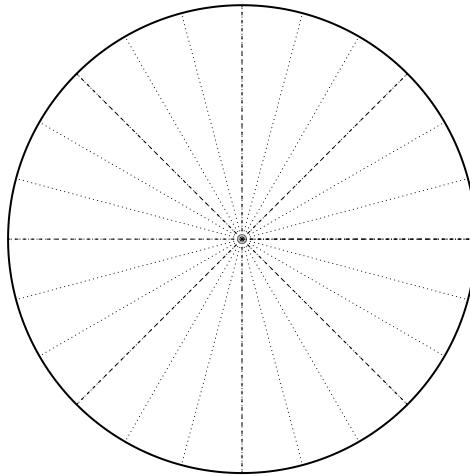
u12 Radians, Degrees, and Arc Length EXAM (version 118)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

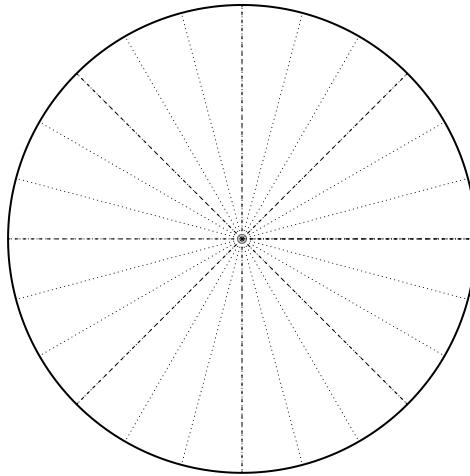


u12 Radians, Degrees, and Arc Length EXAM (version 118)

2. On the circle below, draw a sketch of a -1350° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-9\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



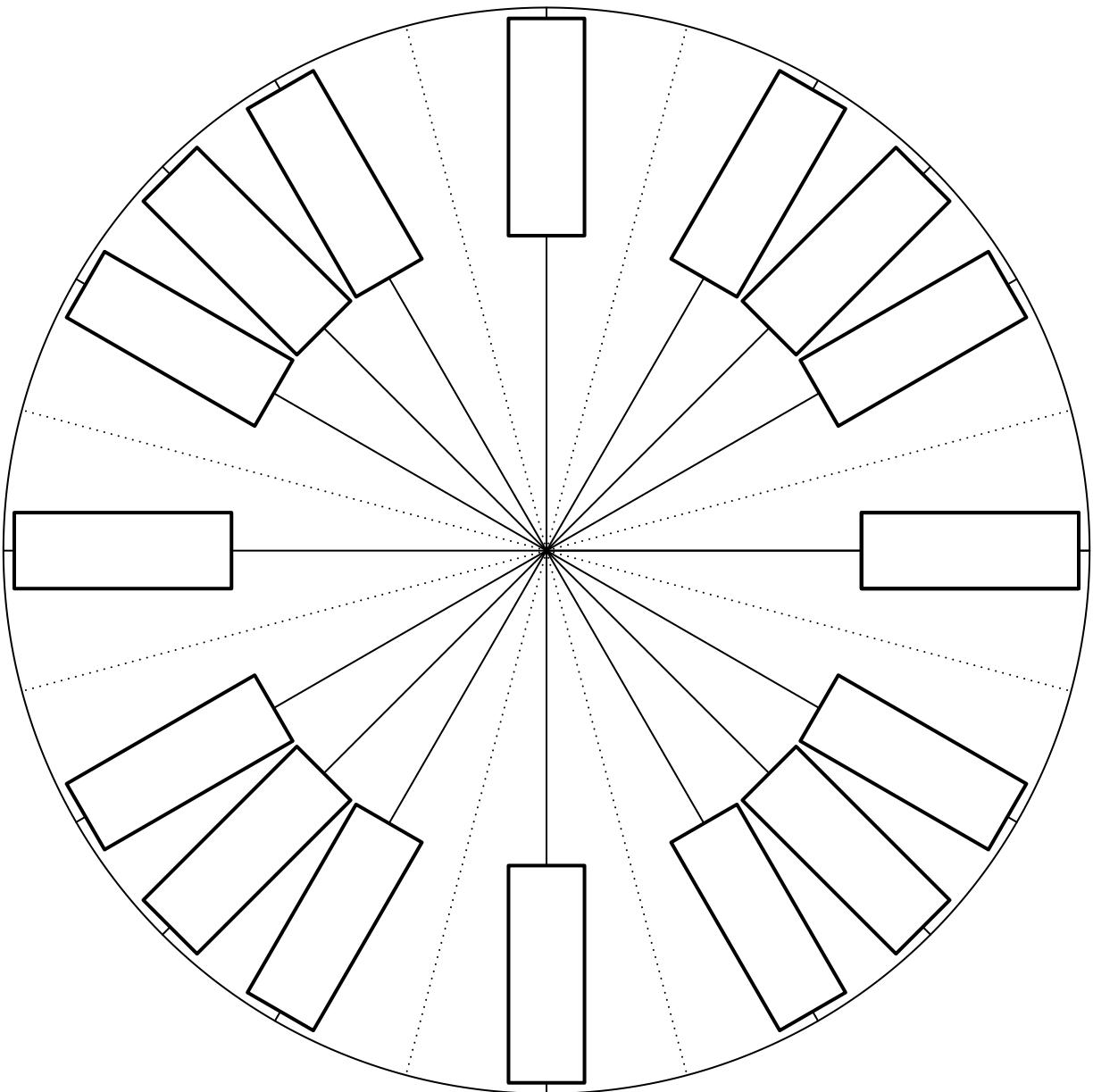
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

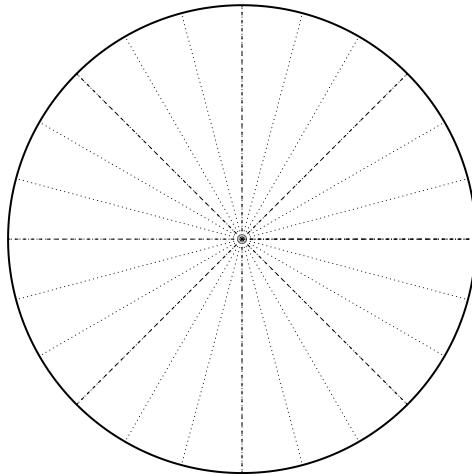
u12 Radians, Degrees, and Arc Length EXAM (version 119)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

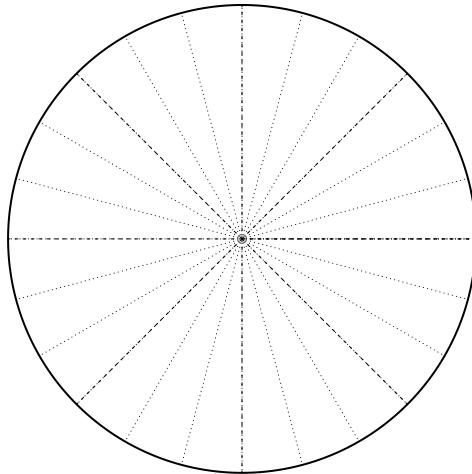


u12 Radians, Degrees, and Arc Length EXAM (version 119)

2. On the circle below, draw a sketch of a -1290° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-8\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



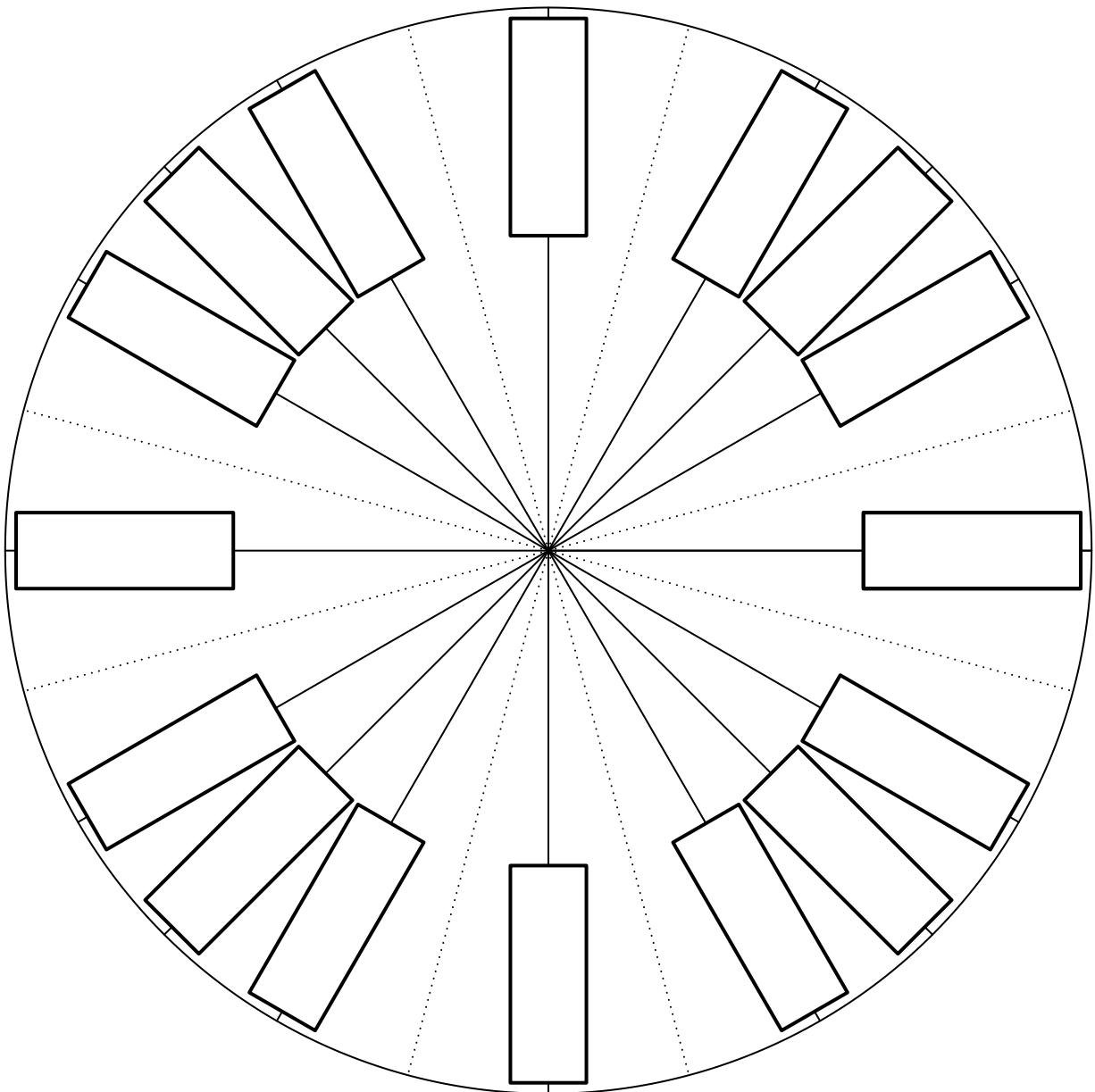
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

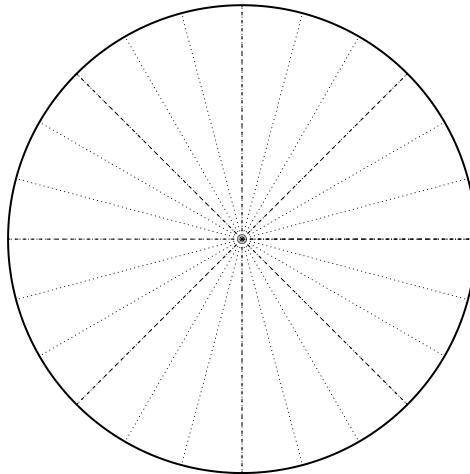
u12 Radians, Degrees, and Arc Length EXAM (version 120)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

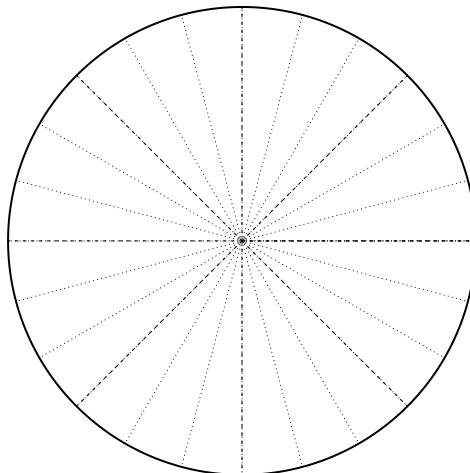


u12 Radians, Degrees, and Arc Length EXAM (version 120)

2. On the circle below, draw a sketch of a -420° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



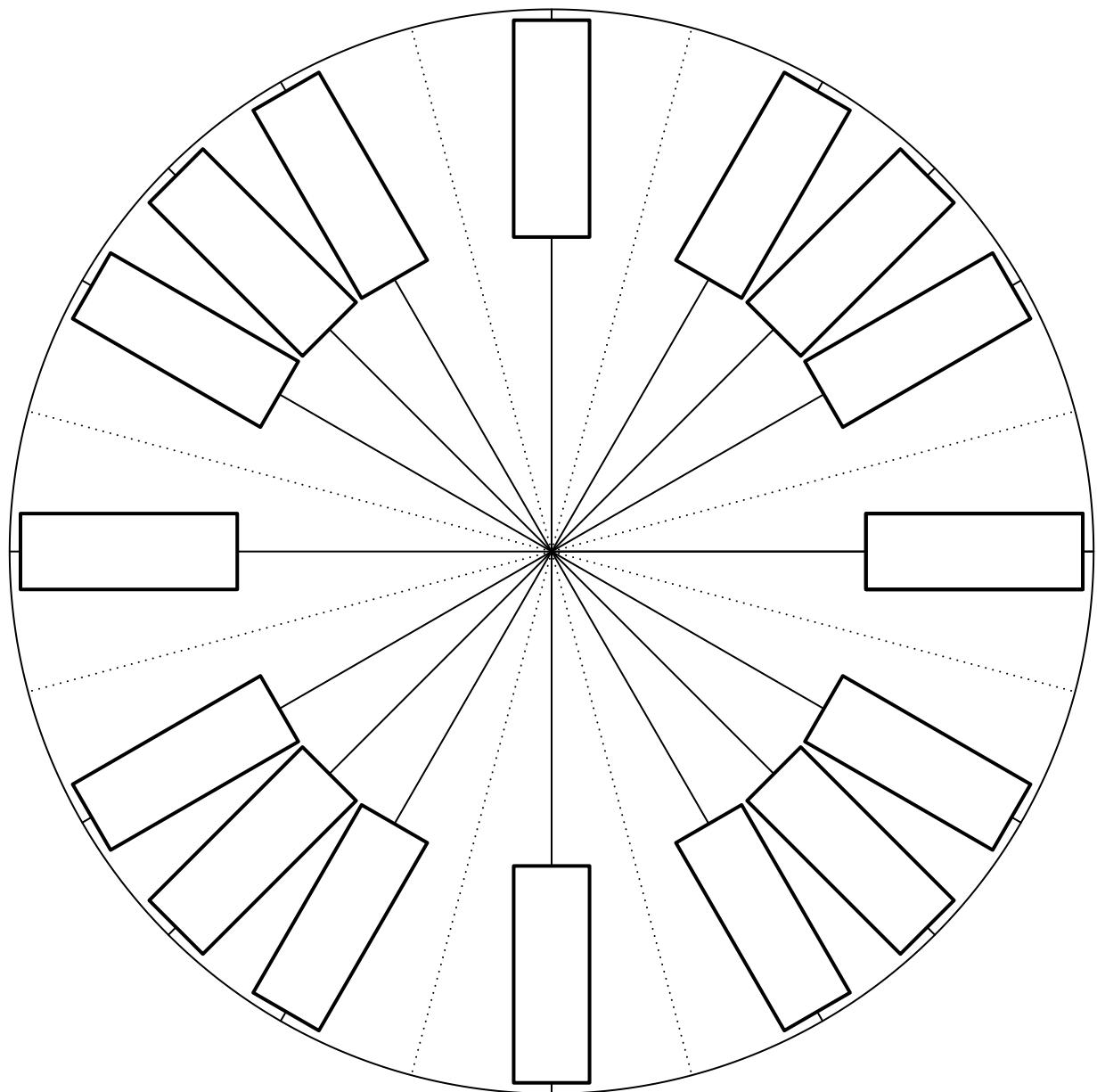
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 4 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

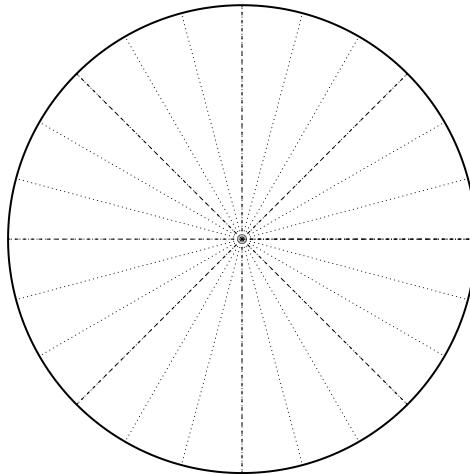
u12 Radians, Degrees, and Arc Length EXAM (version 121)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

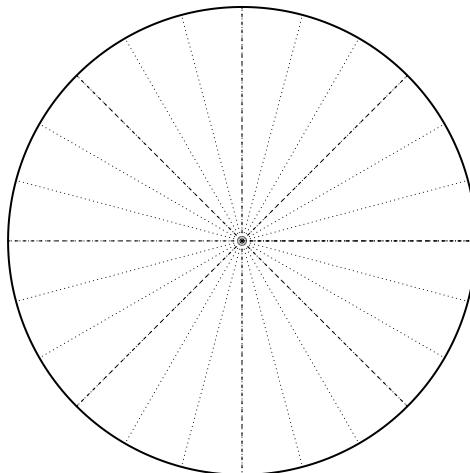


u12 Radians, Degrees, and Arc Length EXAM (version 121)

2. On the circle below, draw a sketch of a -1170° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-37\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



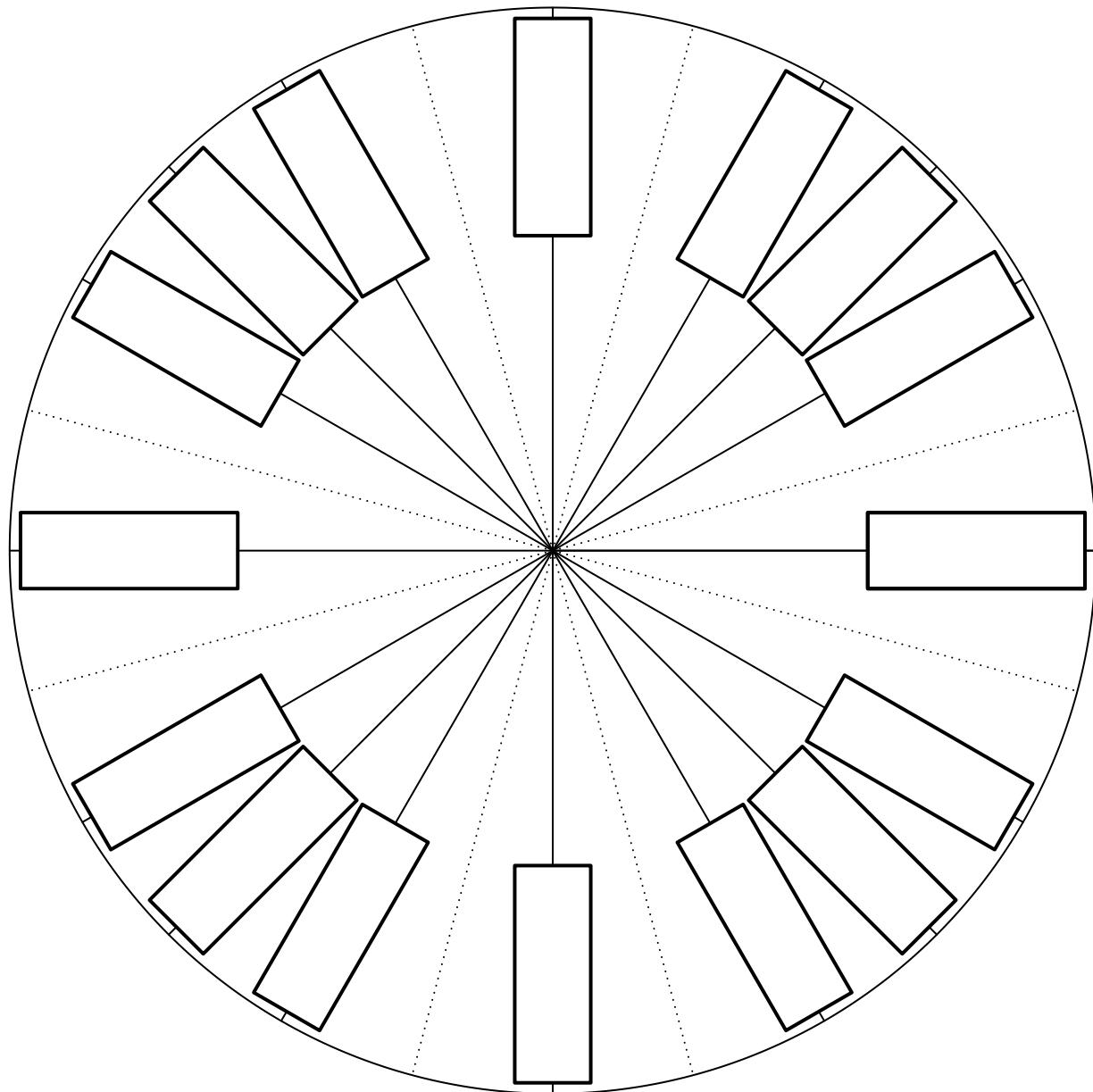
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 6 radians. The arc length equals 24 meters. Find r .

Name: _____

Date: _____

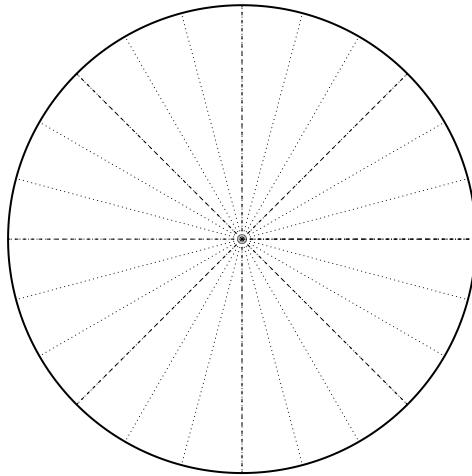
u12 Radians, Degrees, and Arc Length EXAM (version 122)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

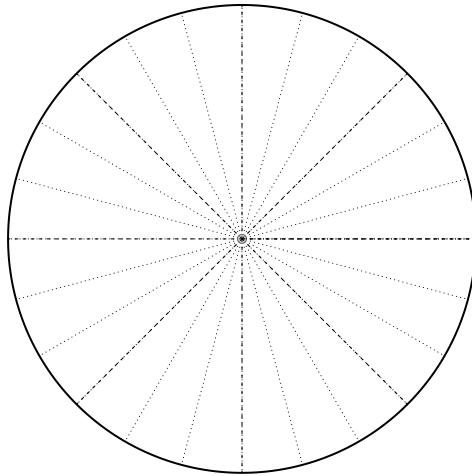


u12 Radians, Degrees, and Arc Length EXAM (version 122)

2. On the circle below, draw a sketch of a -600° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



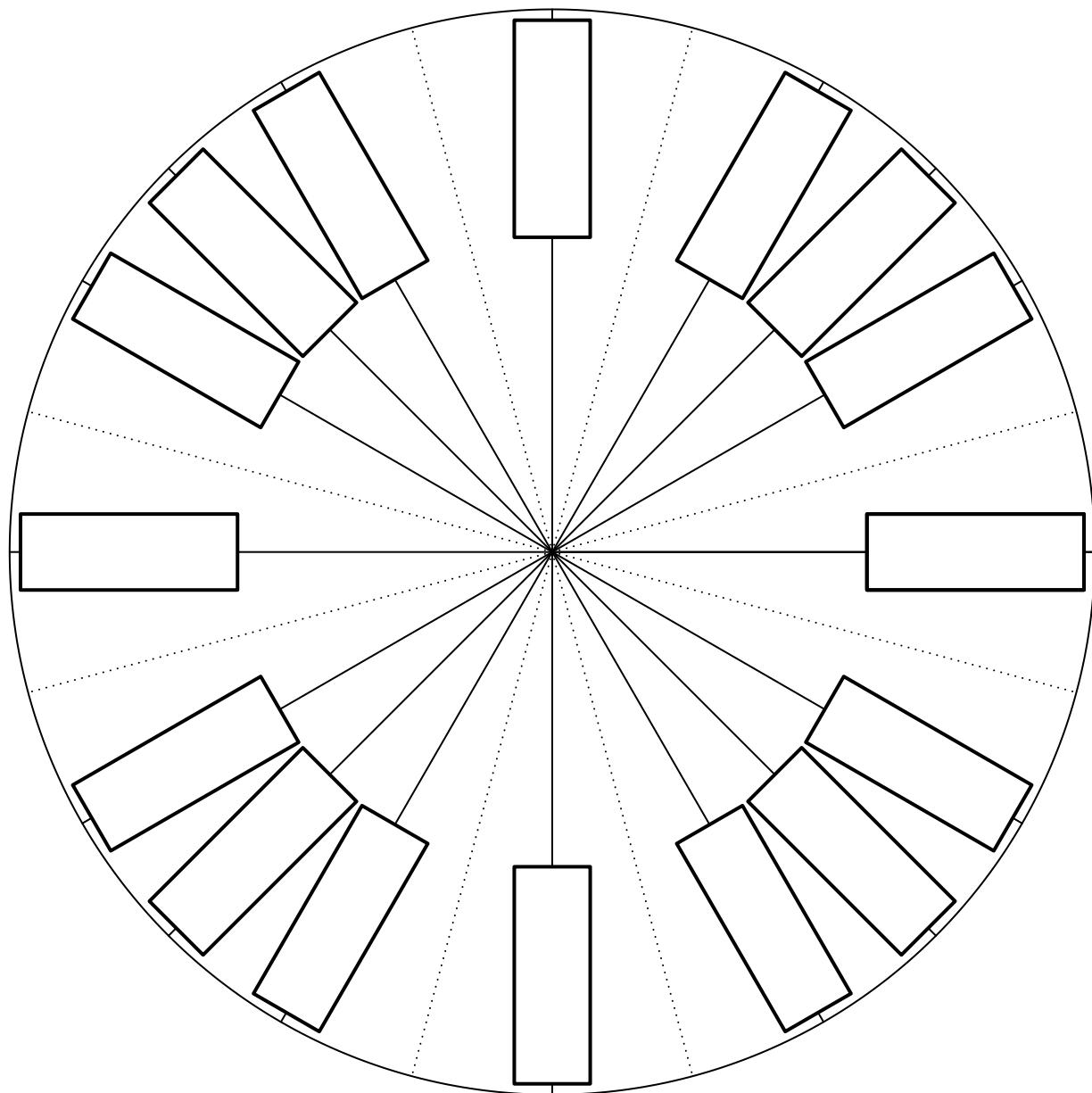
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 8 meters. Find θ .

Name: _____

Date: _____

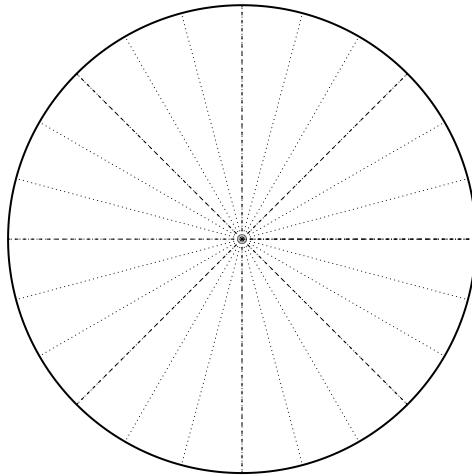
u12 Radians, Degrees, and Arc Length EXAM (version 123)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

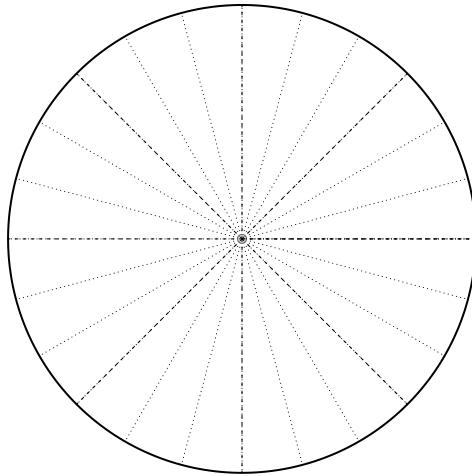


u12 Radians, Degrees, and Arc Length EXAM (version 123)

2. On the circle below, draw a sketch of a 1140° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{22\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



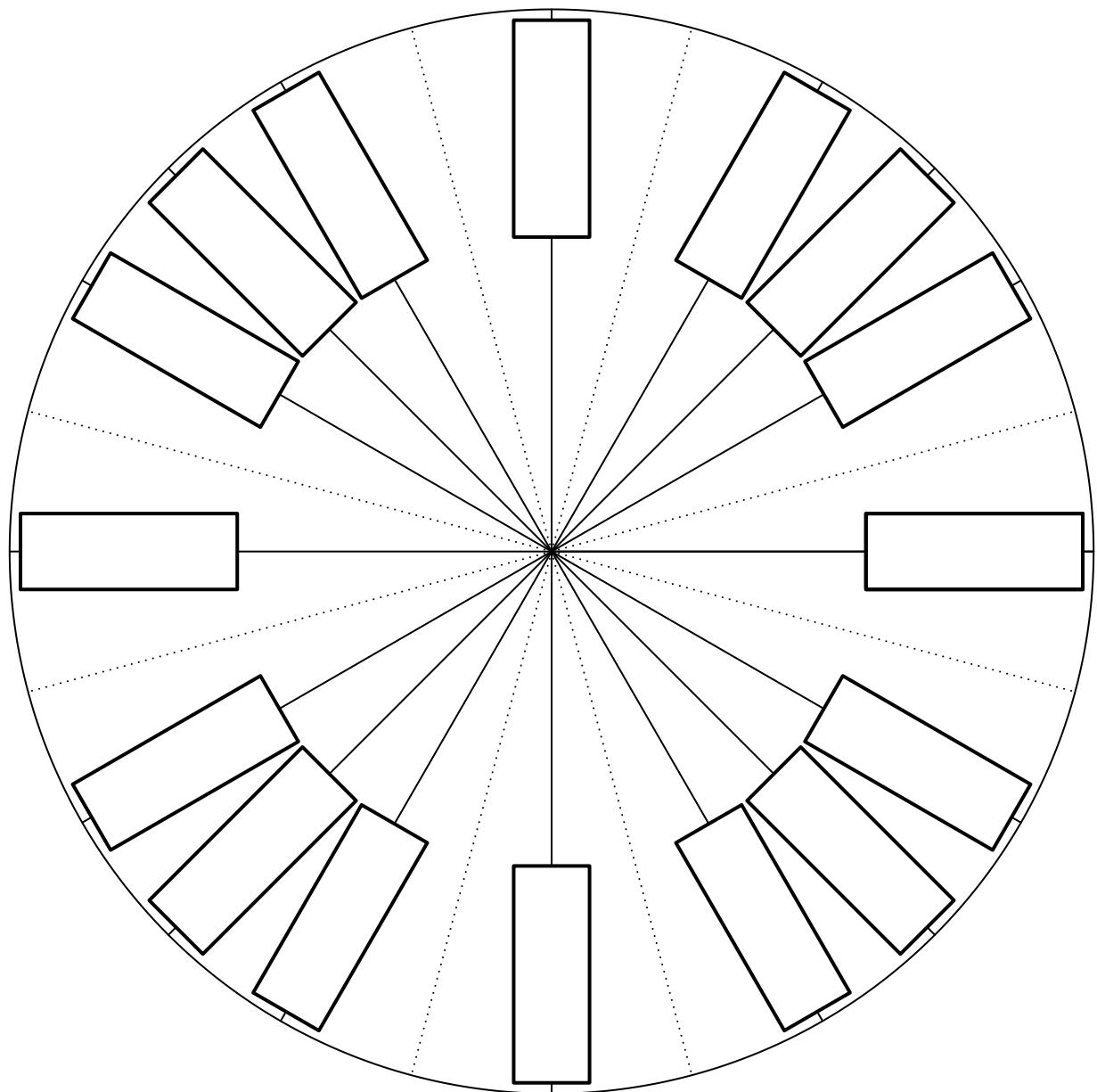
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 8 meters. Find θ .

Name: _____

Date: _____

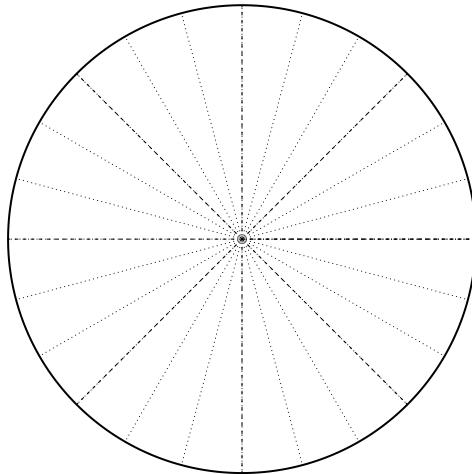
u12 Radians, Degrees, and Arc Length EXAM (version 124)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

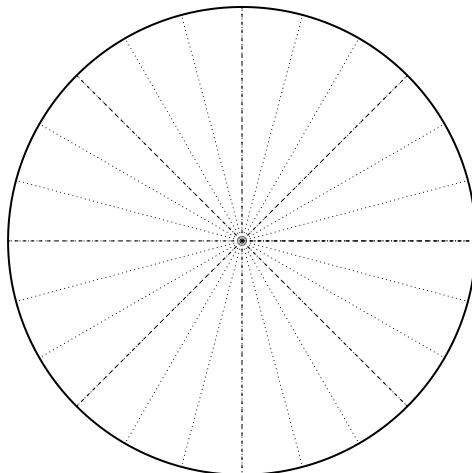


u12 Radians, Degrees, and Arc Length EXAM (version 124)

2. On the circle below, draw a sketch of a 510° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{20\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



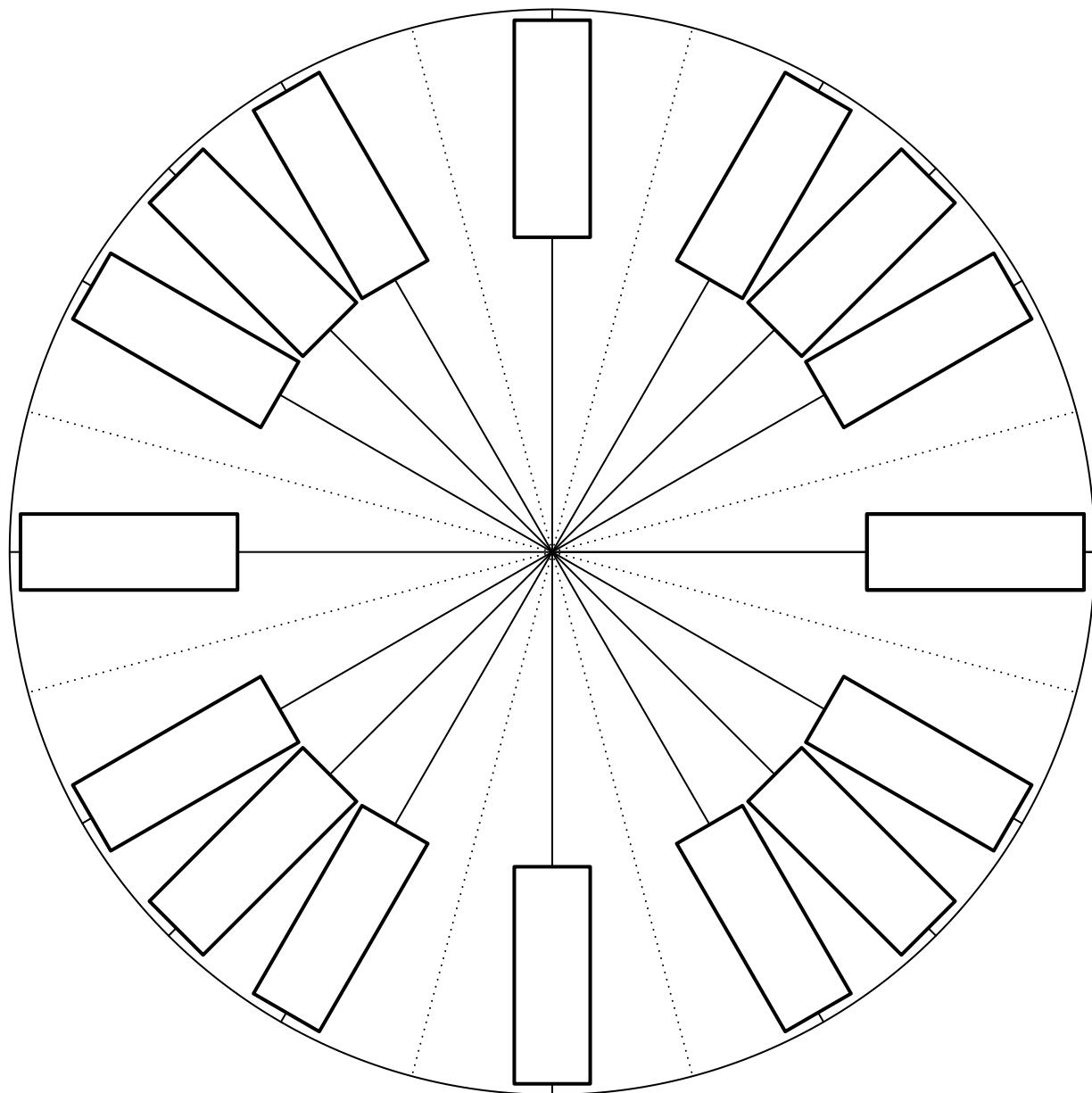
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 18 meters. Find r .

Name: _____

Date: _____

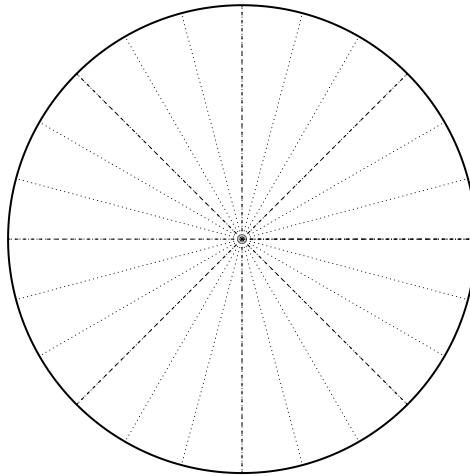
u12 Radians, Degrees, and Arc Length EXAM (version 125)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

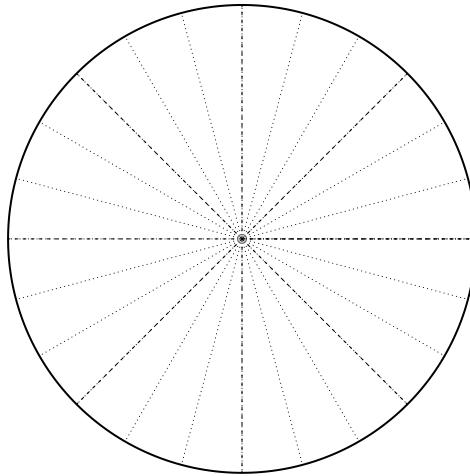


u12 Radians, Degrees, and Arc Length EXAM (version 125)

2. On the circle below, draw a sketch of a -960° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



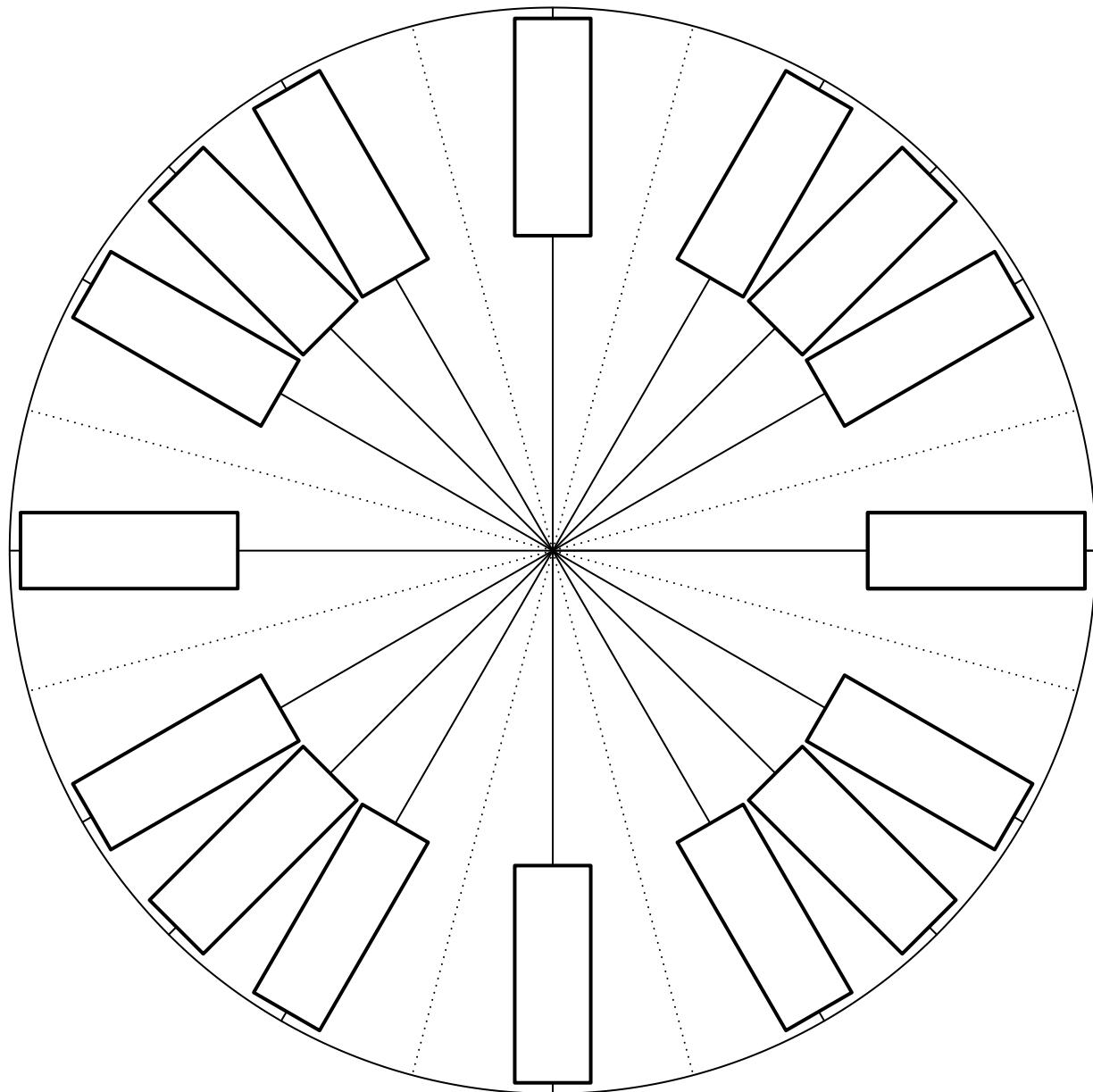
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 20 meters. Find θ .

Name: _____

Date: _____

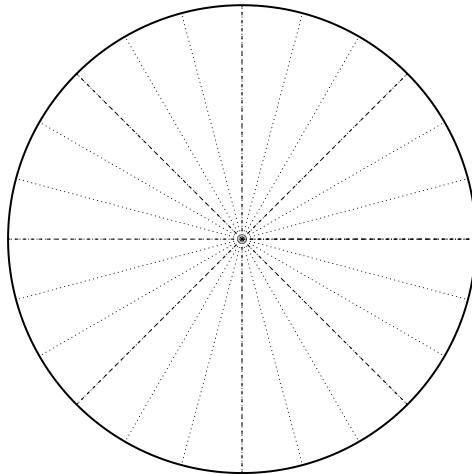
u12 Radians, Degrees, and Arc Length EXAM (version 126)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

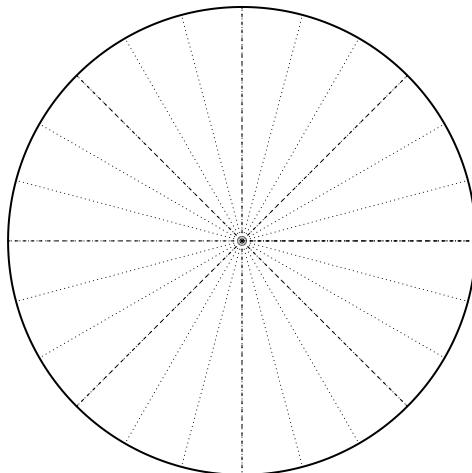


u12 Radians, Degrees, and Arc Length EXAM (version 126)

2. On the circle below, draw a sketch of a -960° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-47\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



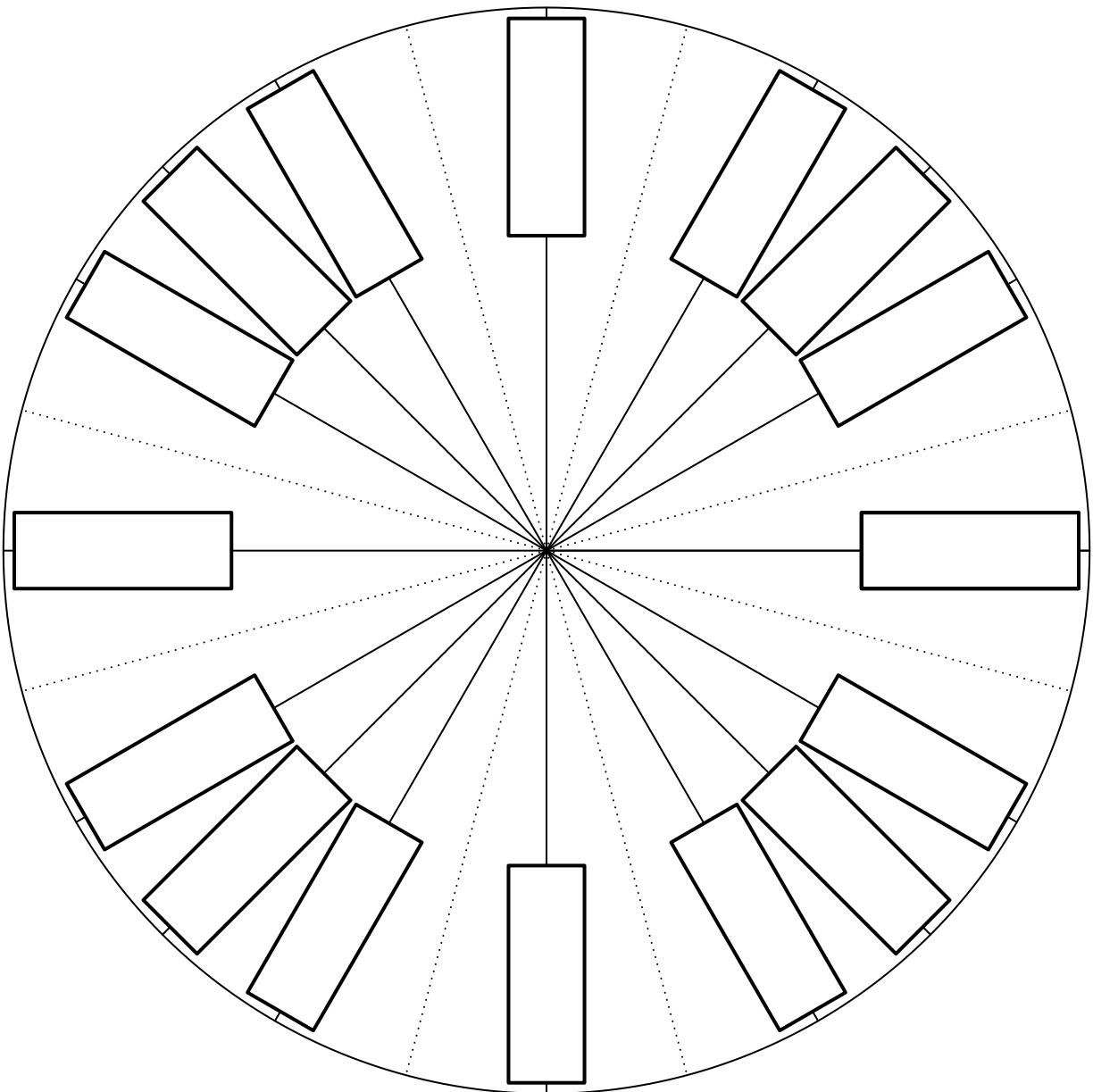
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals θ radians. The arc length equals 6 meters. Find θ .

Name: _____

Date: _____

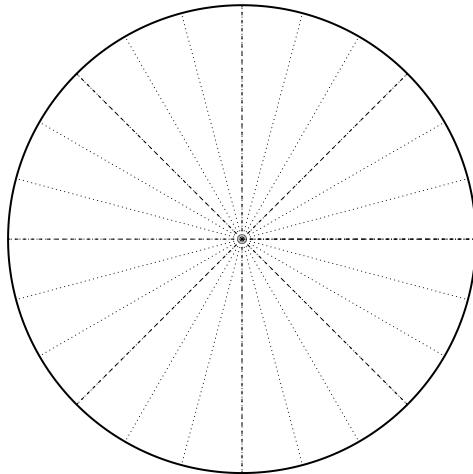
u12 Radians, Degrees, and Arc Length EXAM (version 127)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

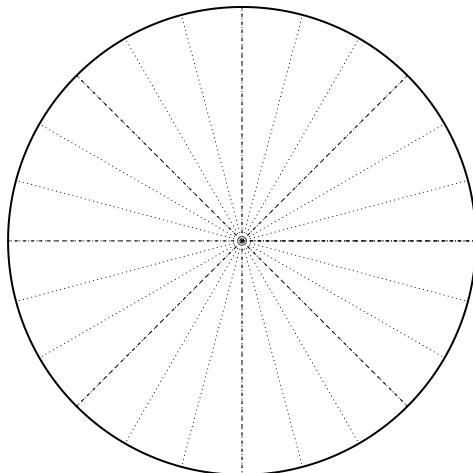


u12 Radians, Degrees, and Arc Length EXAM (version 127)

2. On the circle below, draw a sketch of a 420° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



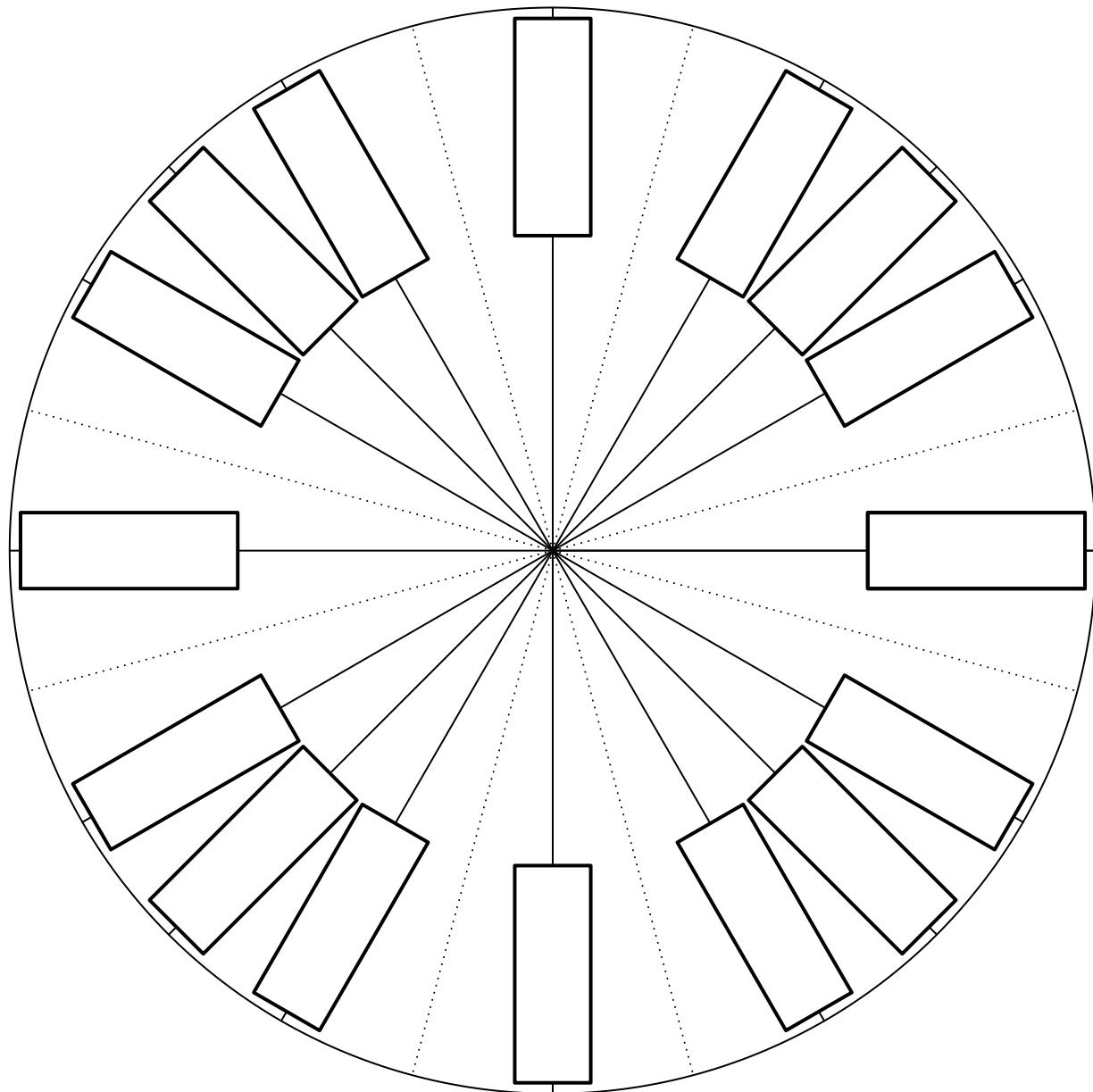
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals 6 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

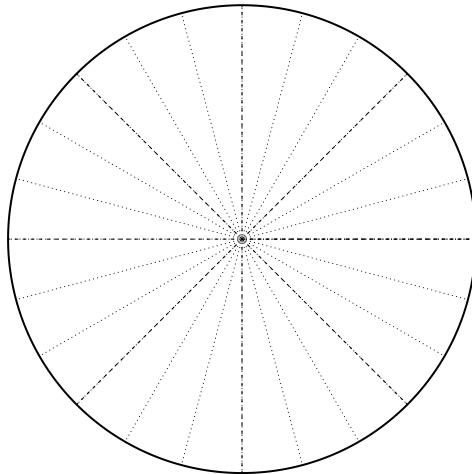
u12 Radians, Degrees, and Arc Length EXAM (version 128)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

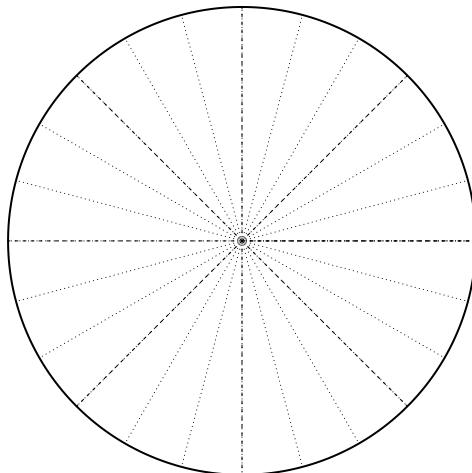


u12 Radians, Degrees, and Arc Length EXAM (version 128)

2. On the circle below, draw a sketch of a 750° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-19\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



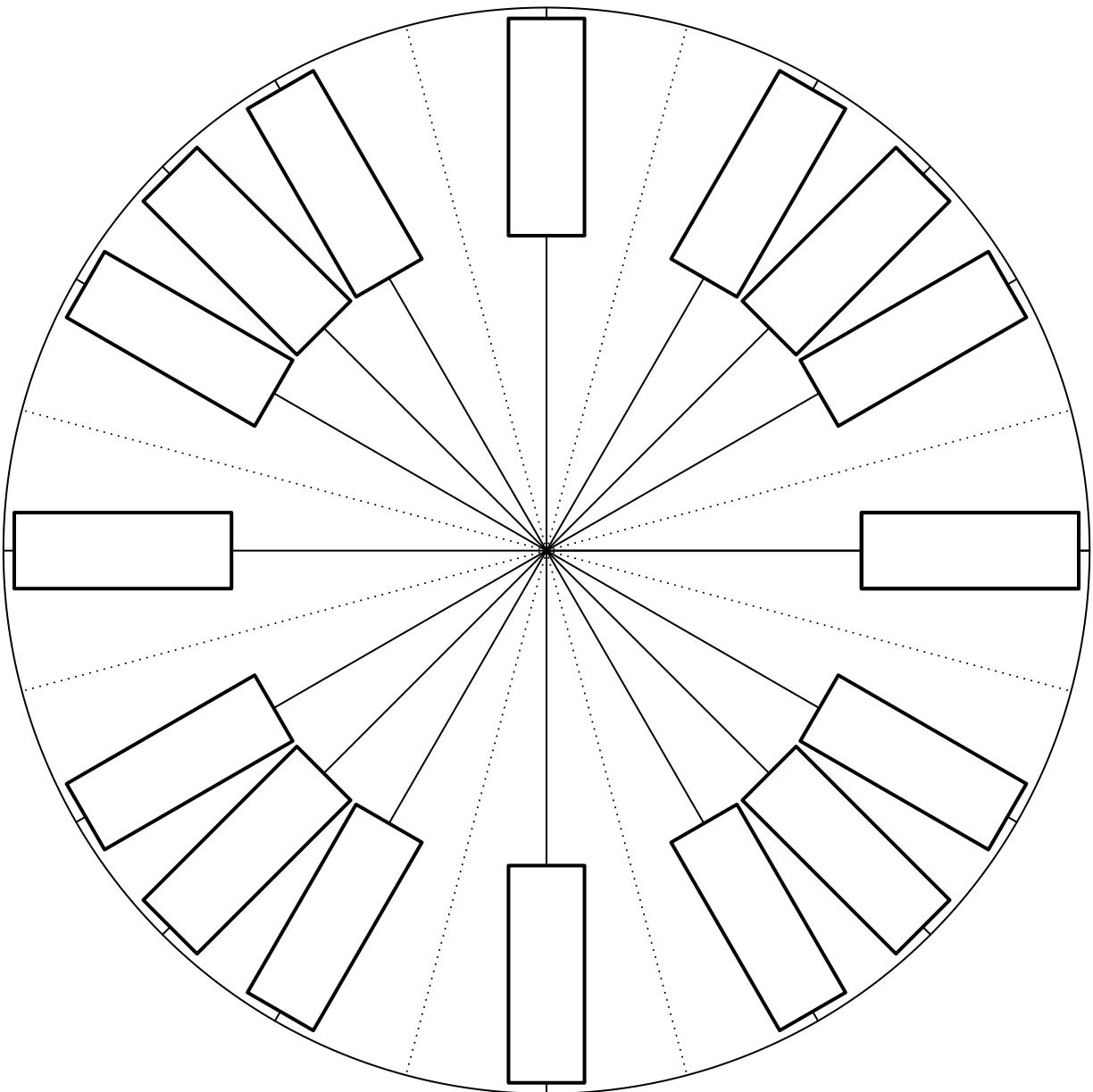
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

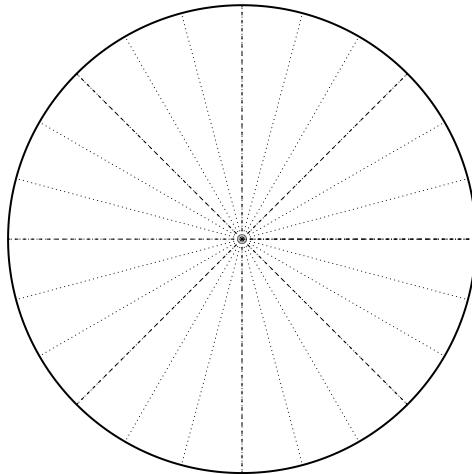
u12 Radians, Degrees, and Arc Length EXAM (version 129)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

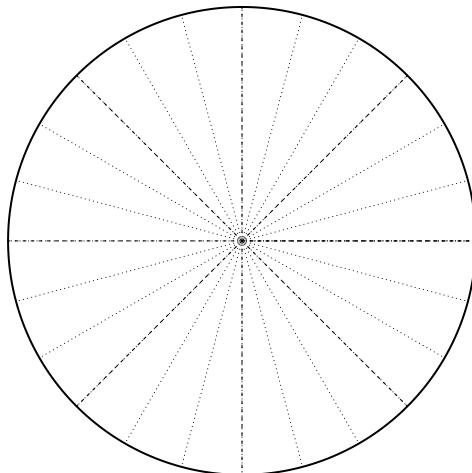


u12 Radians, Degrees, and Arc Length EXAM (version 129)

2. On the circle below, draw a sketch of a 405° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-22\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



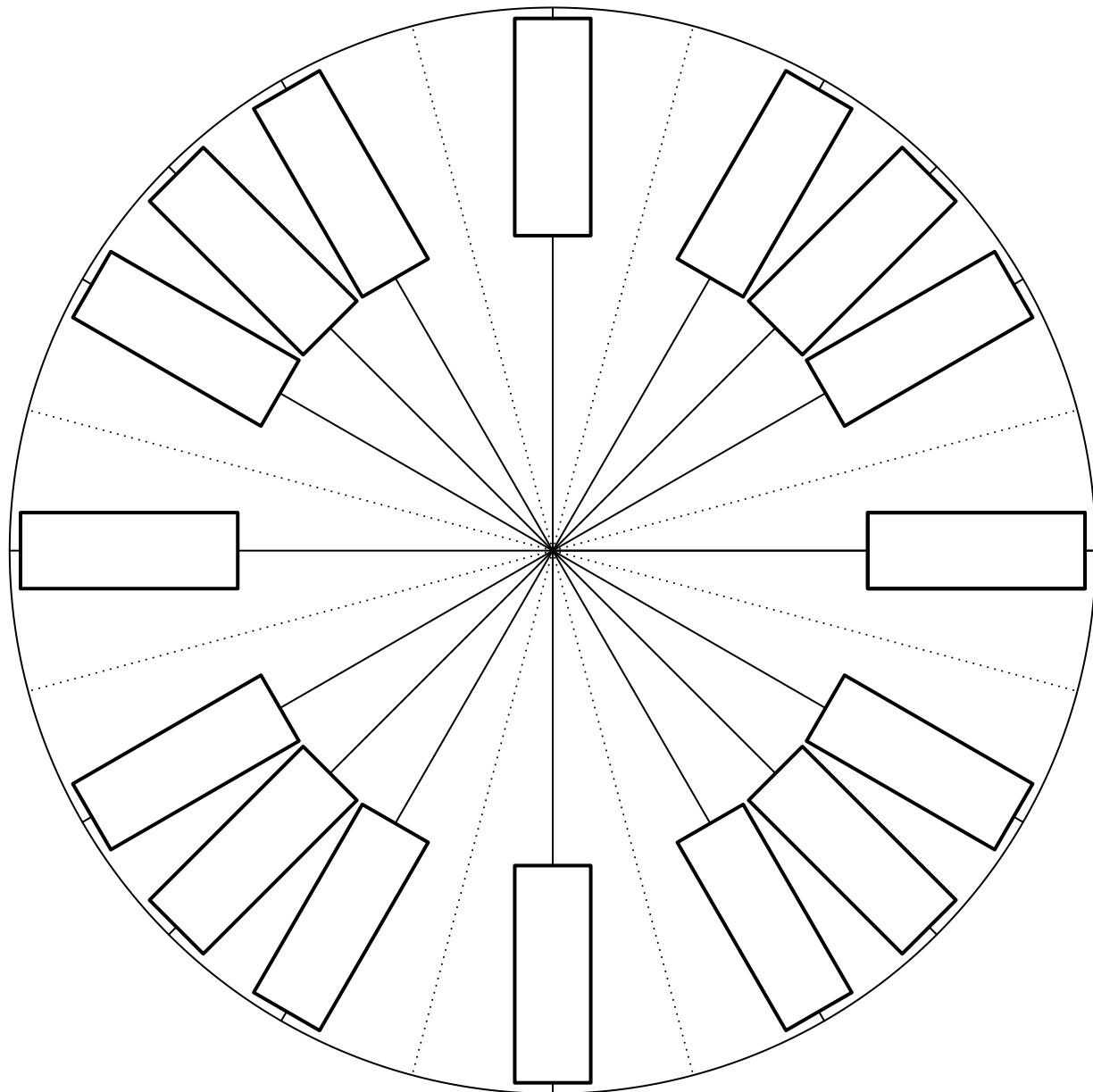
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 15 meters. Find θ .

Name: _____

Date: _____

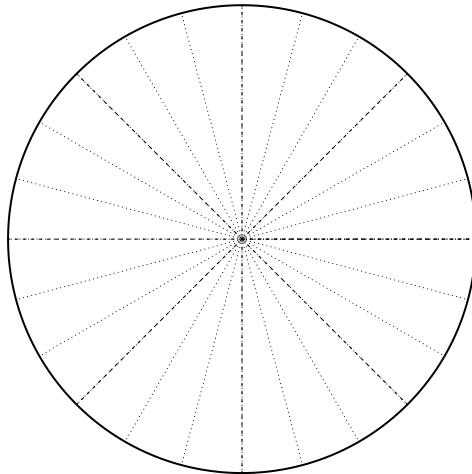
u12 Radians, Degrees, and Arc Length EXAM (version 130)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

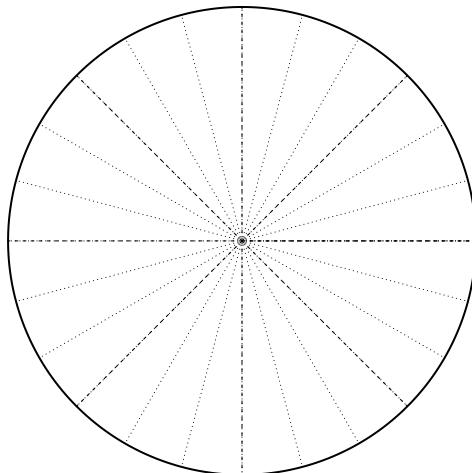


u12 Radians, Degrees, and Arc Length EXAM (version 130)

2. On the circle below, draw a sketch of a -1395° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{31\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



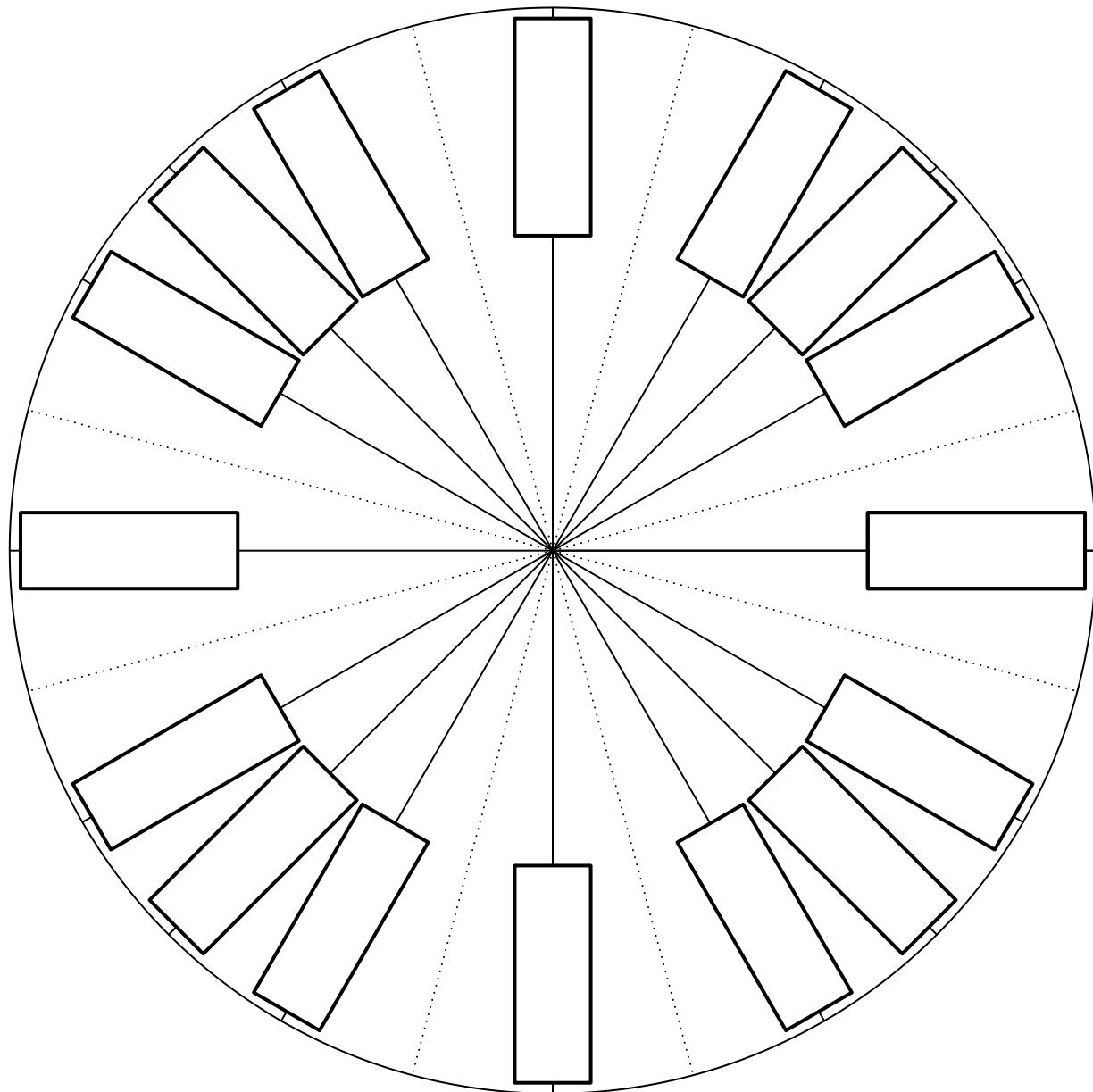
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 20 meters. Find θ .

Name: _____

Date: _____

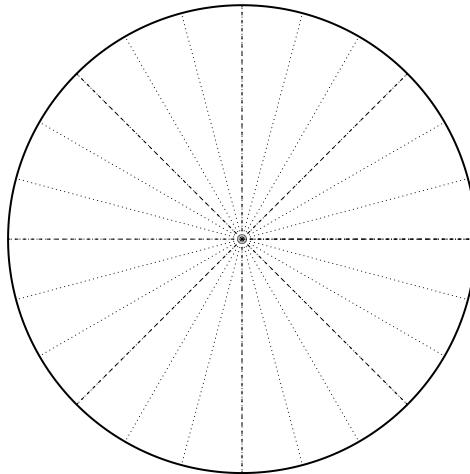
u12 Radians, Degrees, and Arc Length EXAM (version 131)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

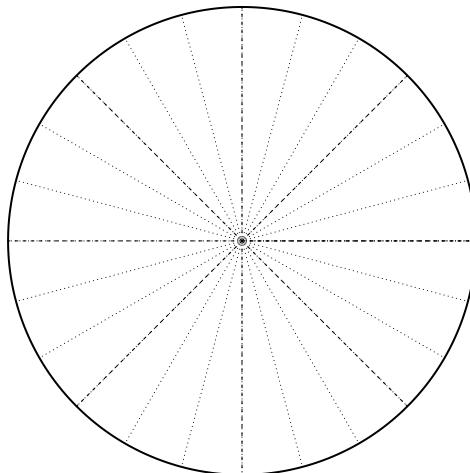


u12 Radians, Degrees, and Arc Length EXAM (version 131)

2. On the circle below, draw a sketch of a 1035° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-22\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



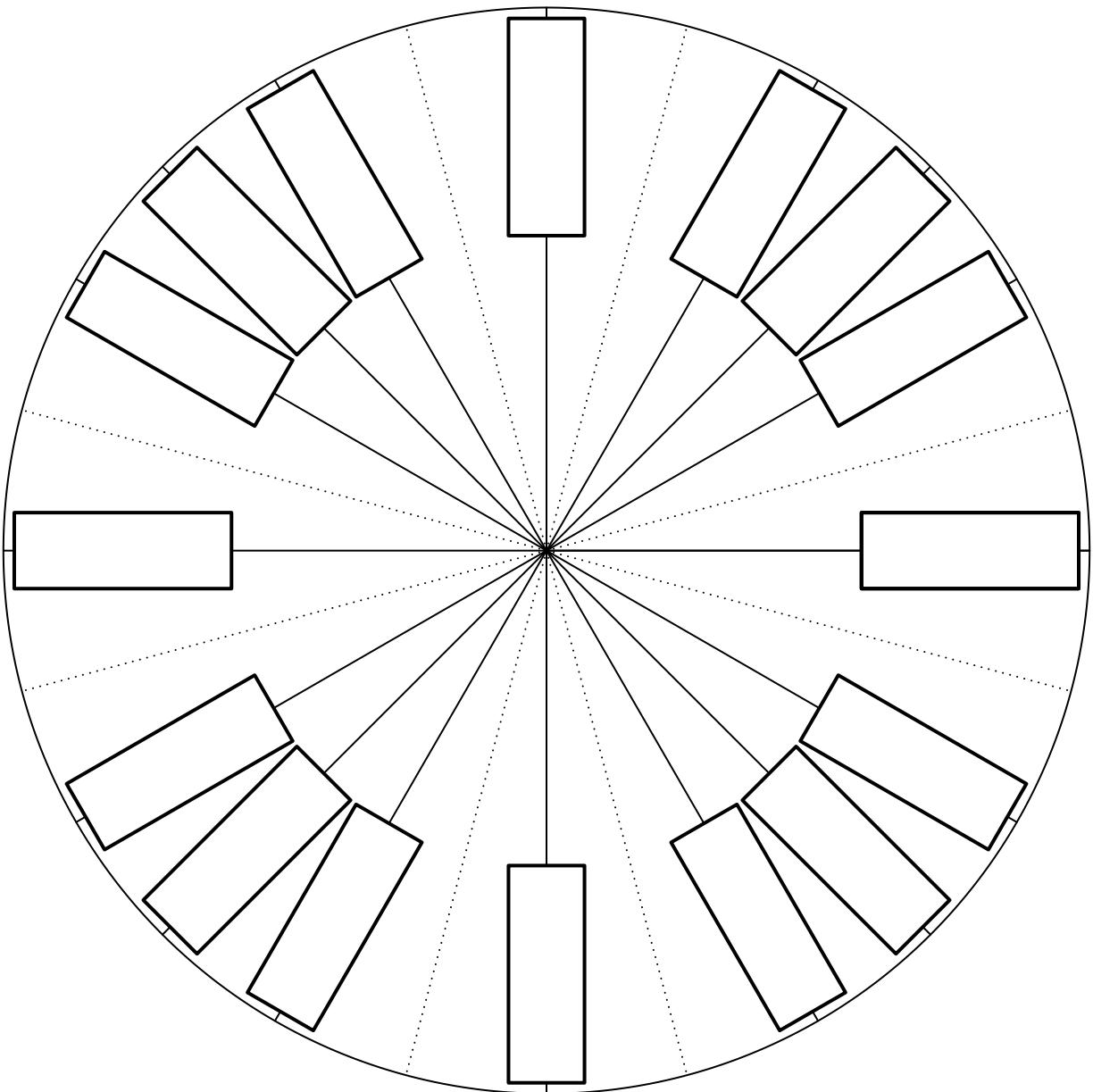
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals θ radians. The arc length equals 18 meters. Find θ .

Name: _____

Date: _____

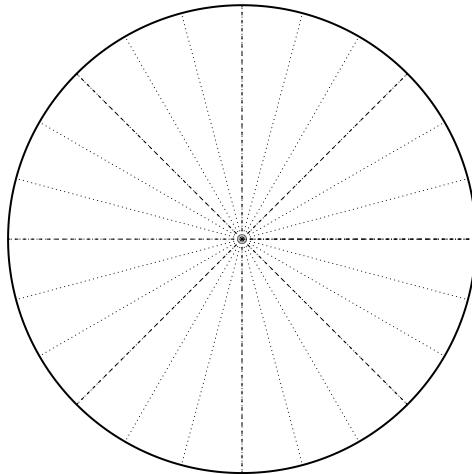
u12 Radians, Degrees, and Arc Length EXAM (version 132)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

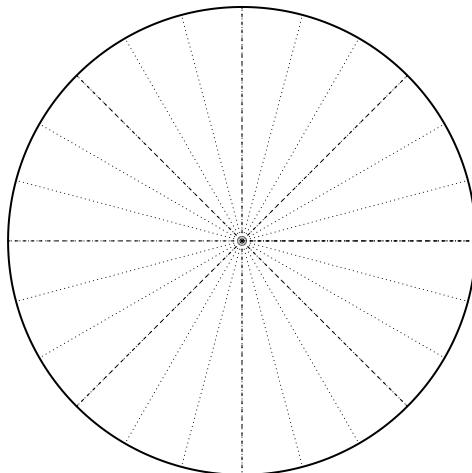


u12 Radians, Degrees, and Arc Length EXAM (version 132)

2. On the circle below, draw a sketch of a 1350° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-11\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



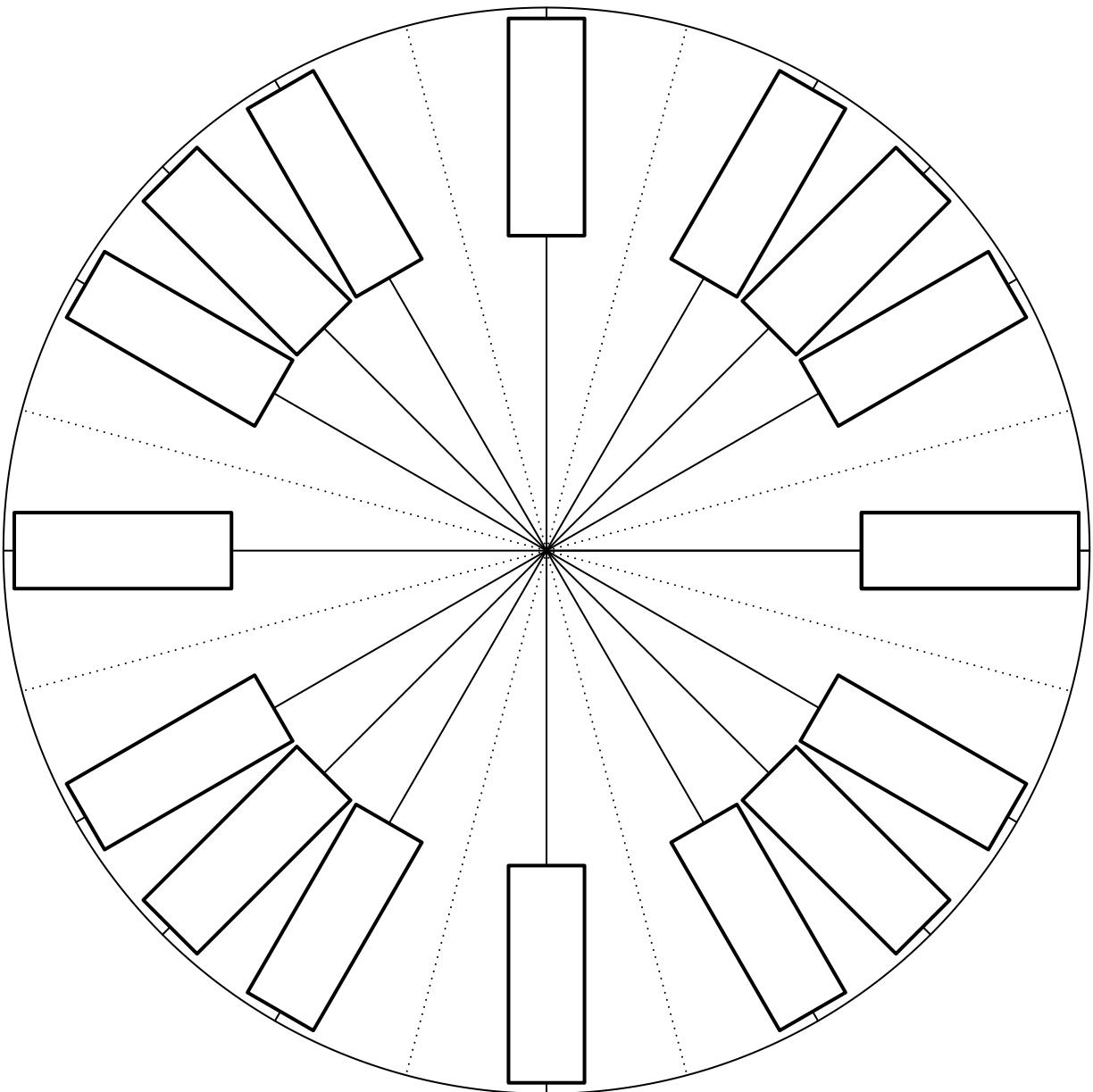
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 8 meters. Find θ .

Name: _____

Date: _____

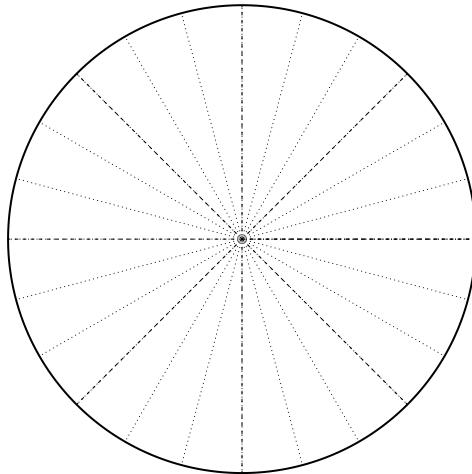
u12 Radians, Degrees, and Arc Length EXAM (version 133)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

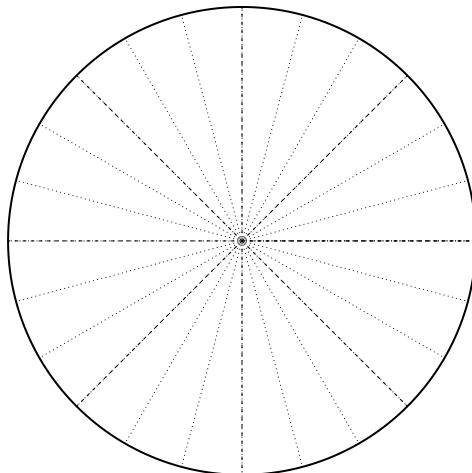


u12 Radians, Degrees, and Arc Length EXAM (version 133)

2. On the circle below, draw a sketch of a 495° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-15\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



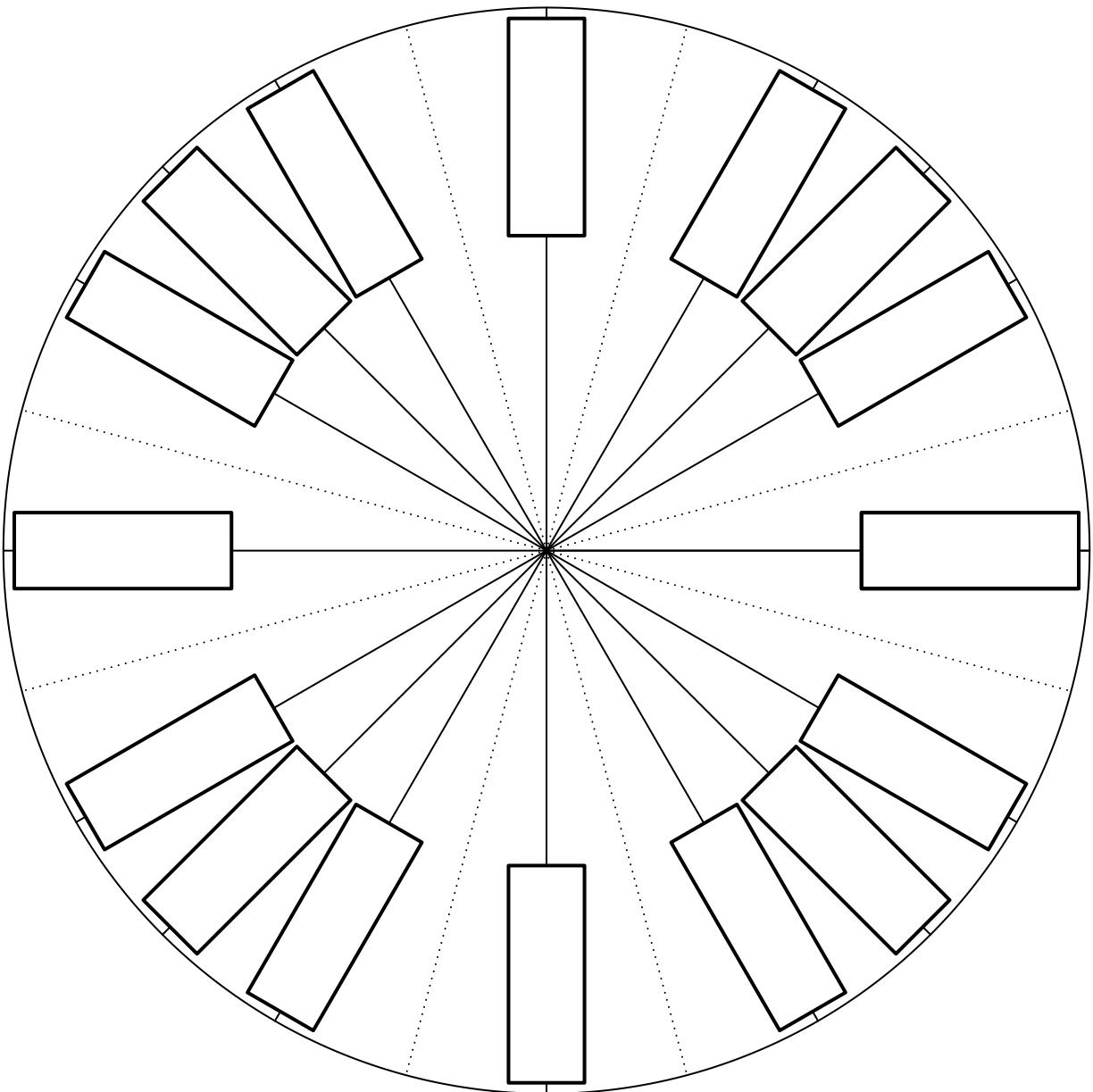
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 6 meters. Find θ .

Name: _____

Date: _____

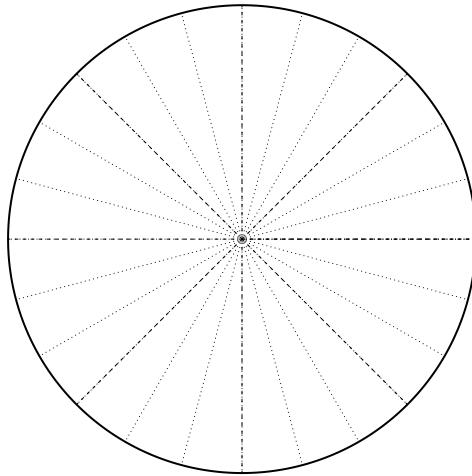
u12 Radians, Degrees, and Arc Length EXAM (version 134)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

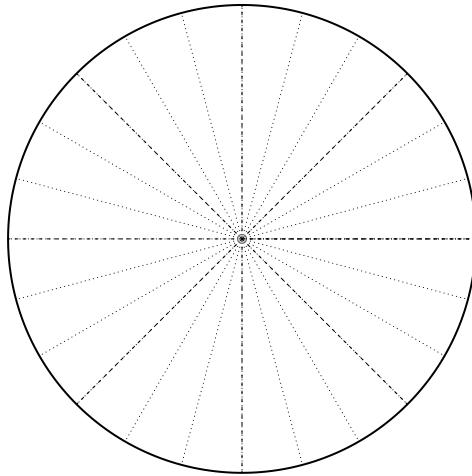


u12 Radians, Degrees, and Arc Length EXAM (version 134)

2. On the circle below, draw a sketch of a -960° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{9\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



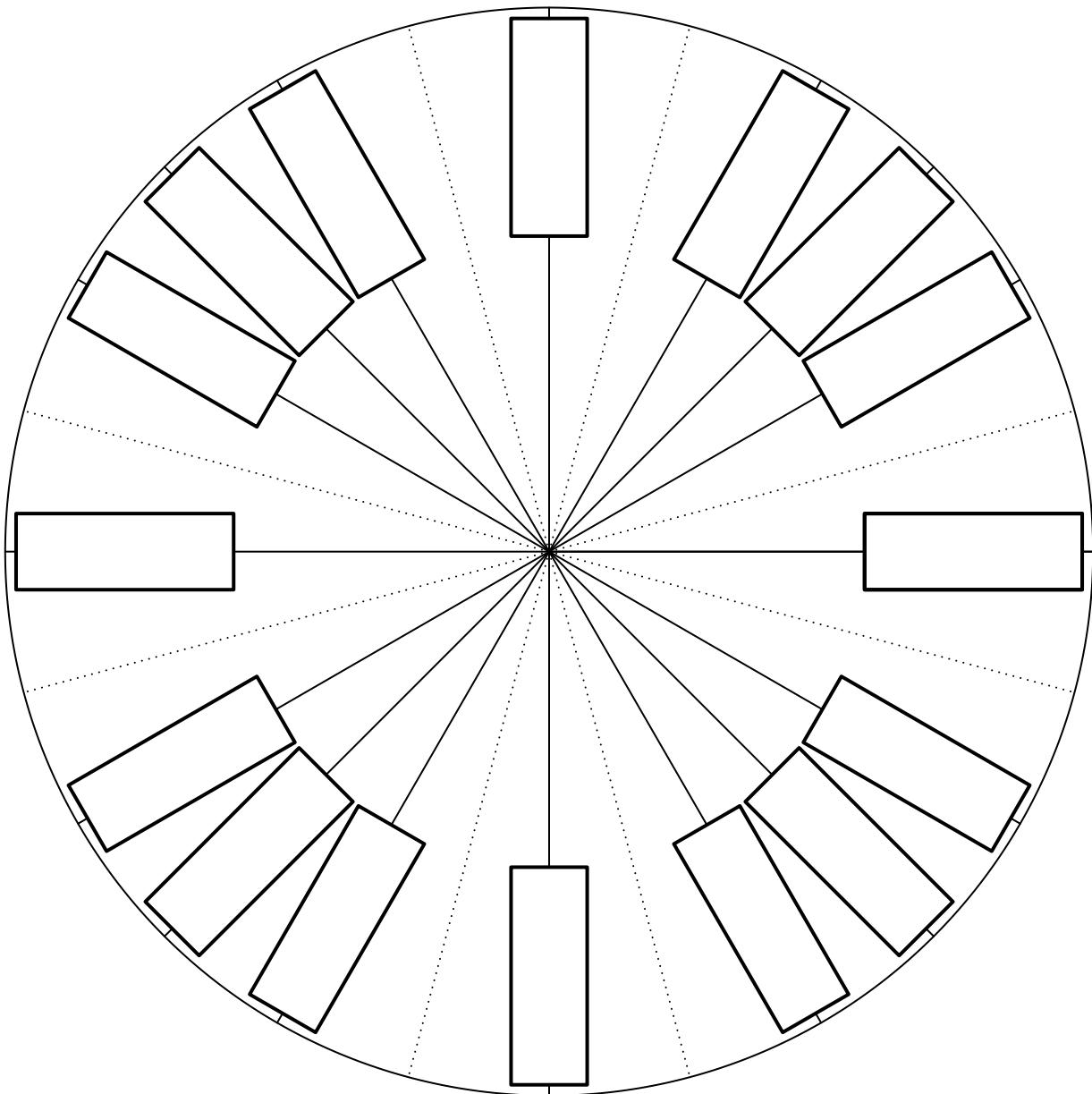
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

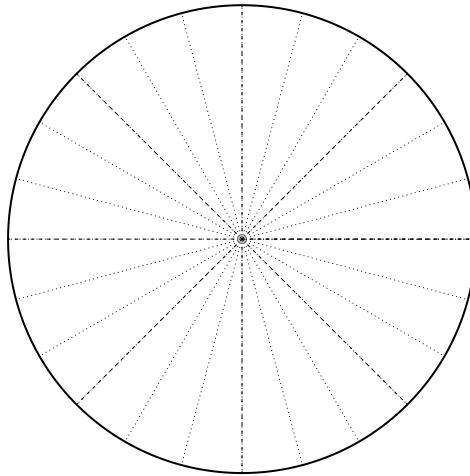
u12 Radians, Degrees, and Arc Length EXAM (version 135)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

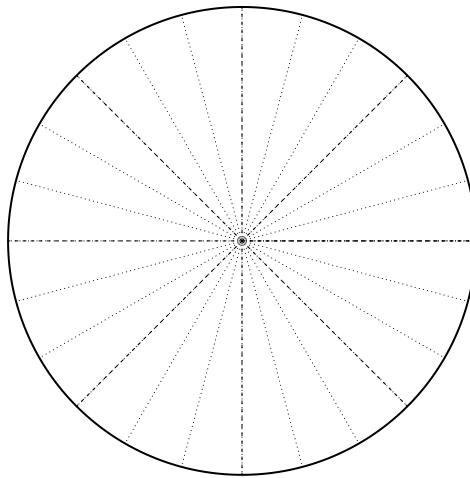


u12 Radians, Degrees, and Arc Length EXAM (version 135)

2. On the circle below, draw a sketch of a -495° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-14\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



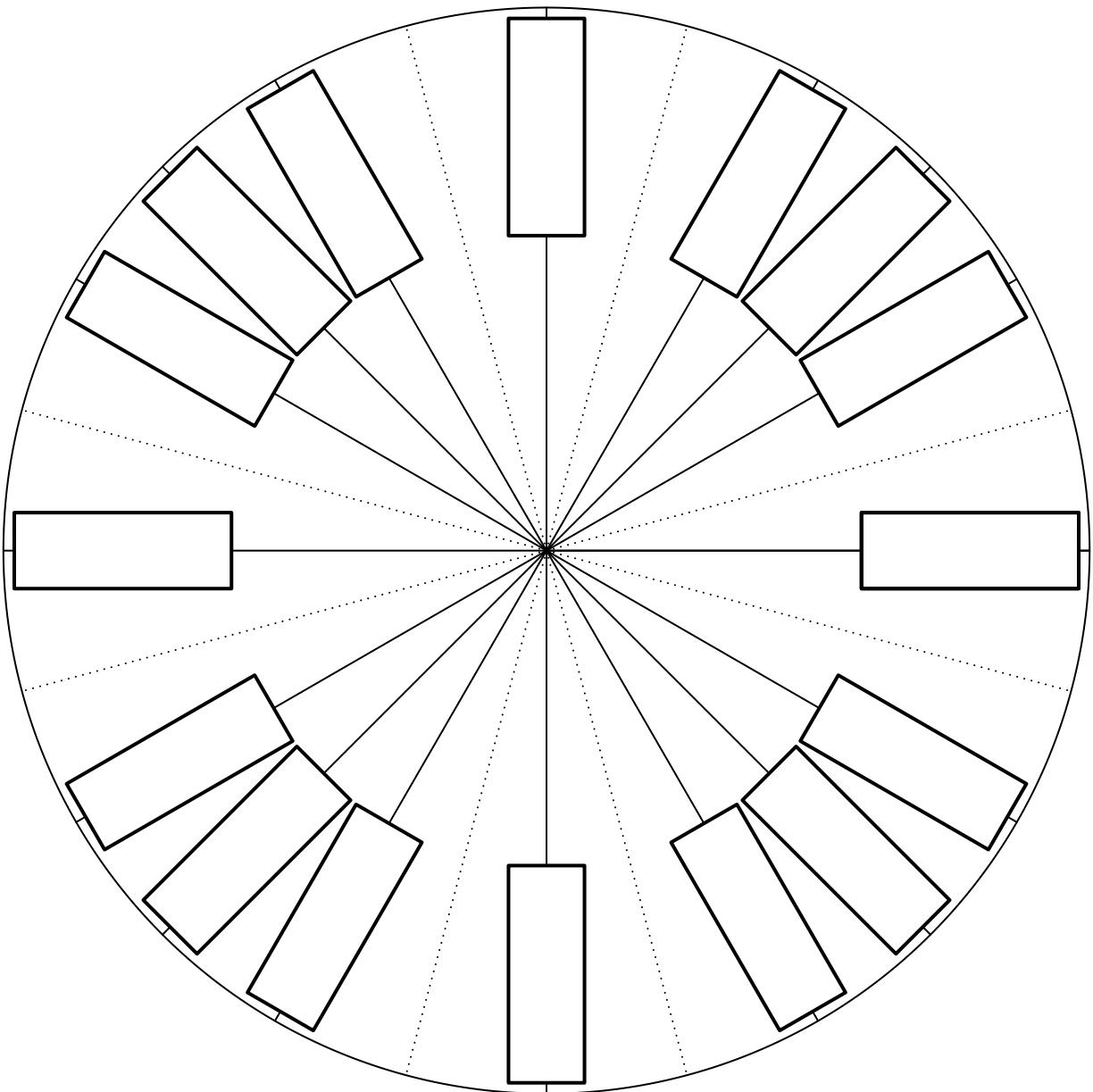
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 30 meters. Find r .

Name: _____

Date: _____

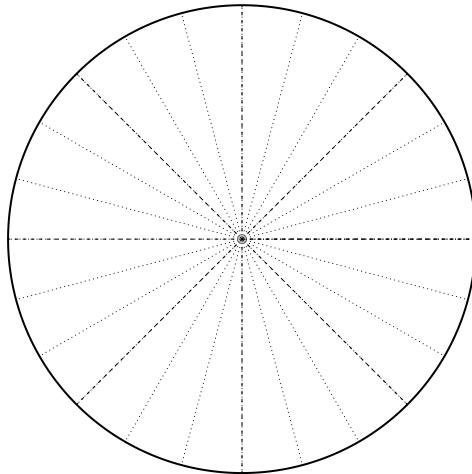
u12 Radians, Degrees, and Arc Length EXAM (version 136)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

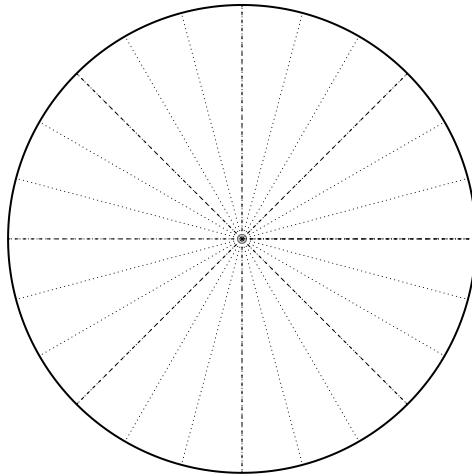


u12 Radians, Degrees, and Arc Length EXAM (version 136)

2. On the circle below, draw a sketch of a -420° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-9\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



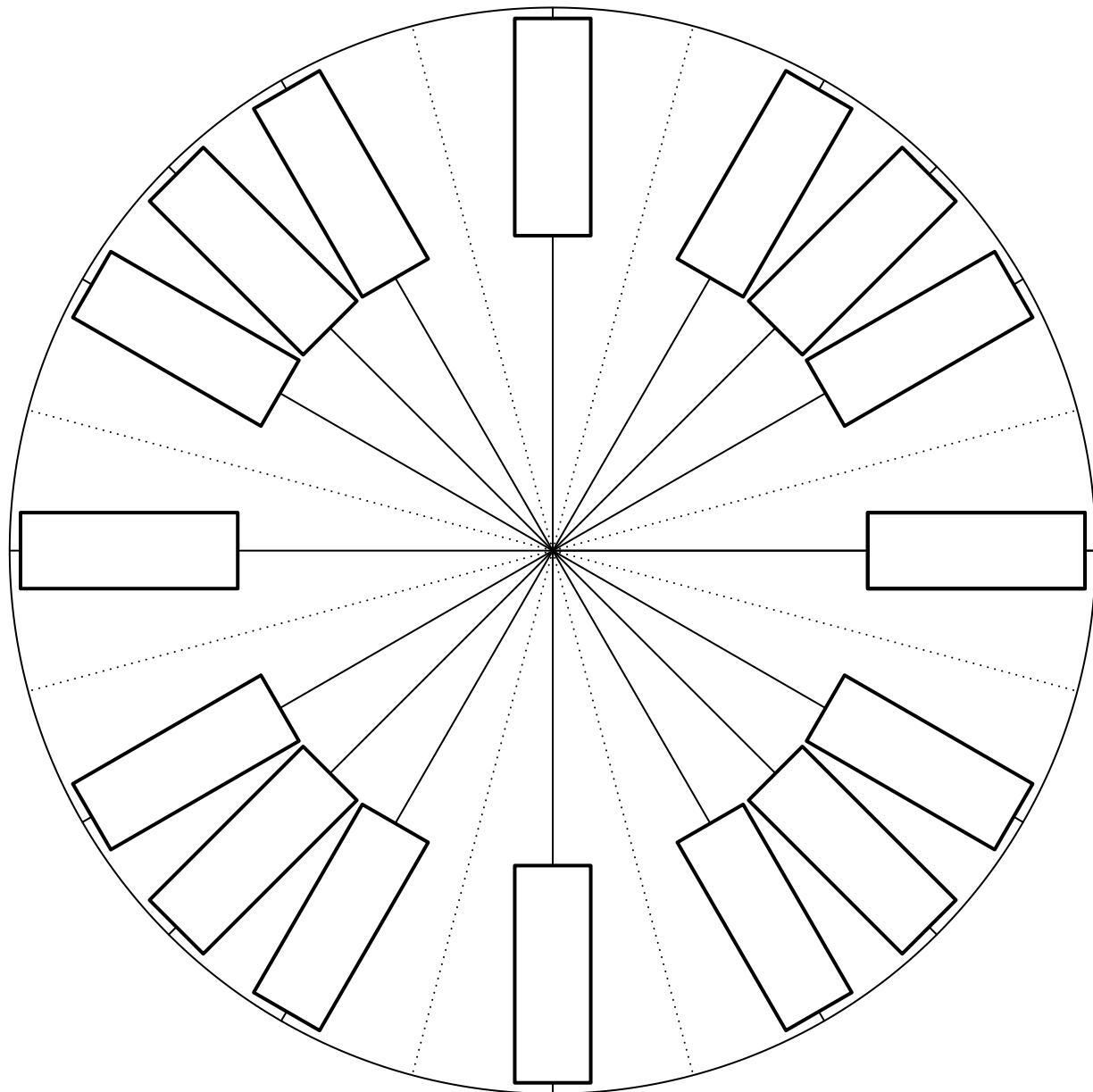
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

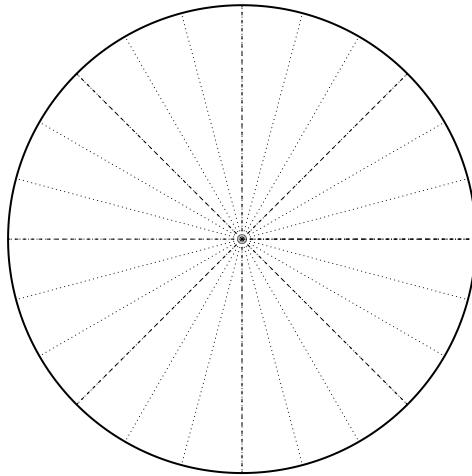
u12 Radians, Degrees, and Arc Length EXAM (version 137)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

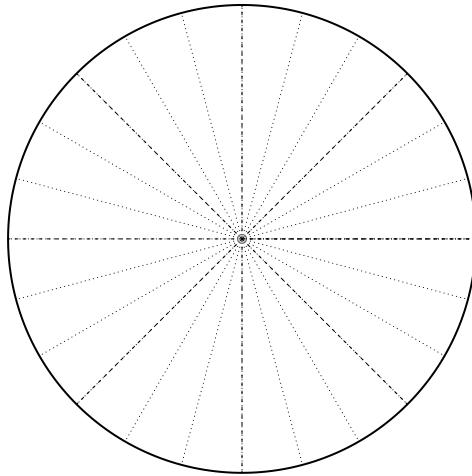


u12 Radians, Degrees, and Arc Length EXAM (version 137)

2. On the circle below, draw a sketch of a 1125° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-11\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



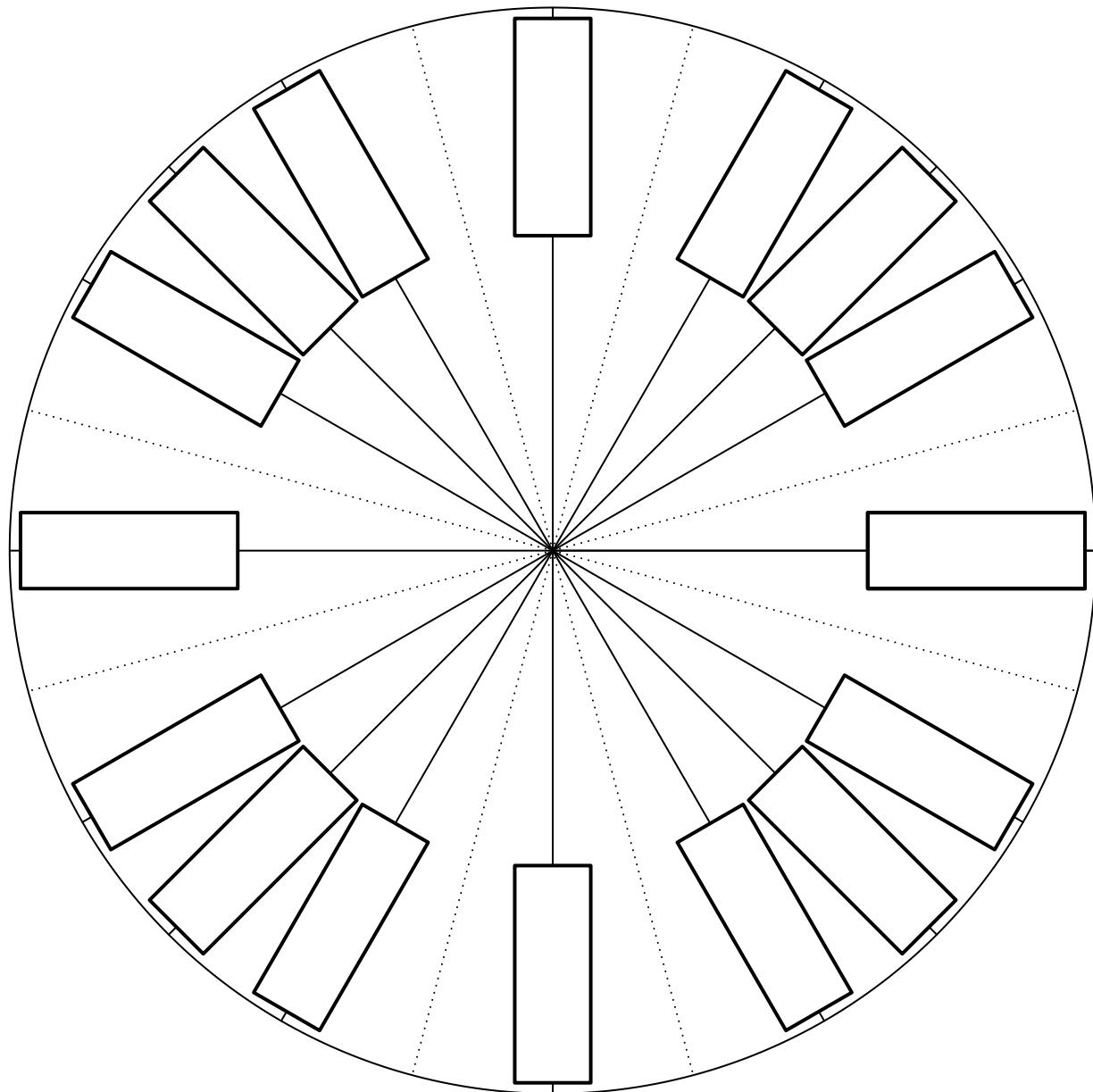
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

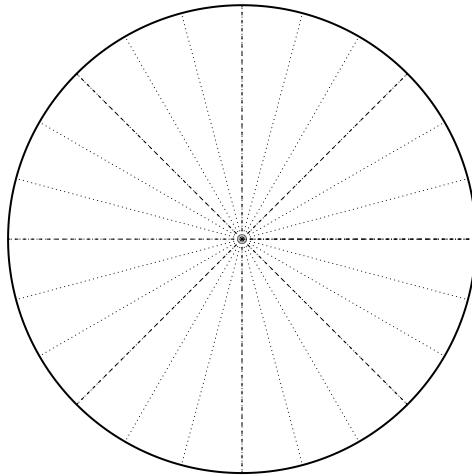
u12 Radians, Degrees, and Arc Length EXAM (version 138)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

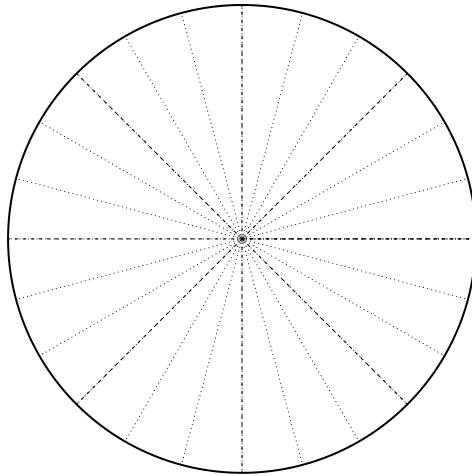


u12 Radians, Degrees, and Arc Length EXAM (version 138)

2. On the circle below, draw a sketch of a -855° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{23\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



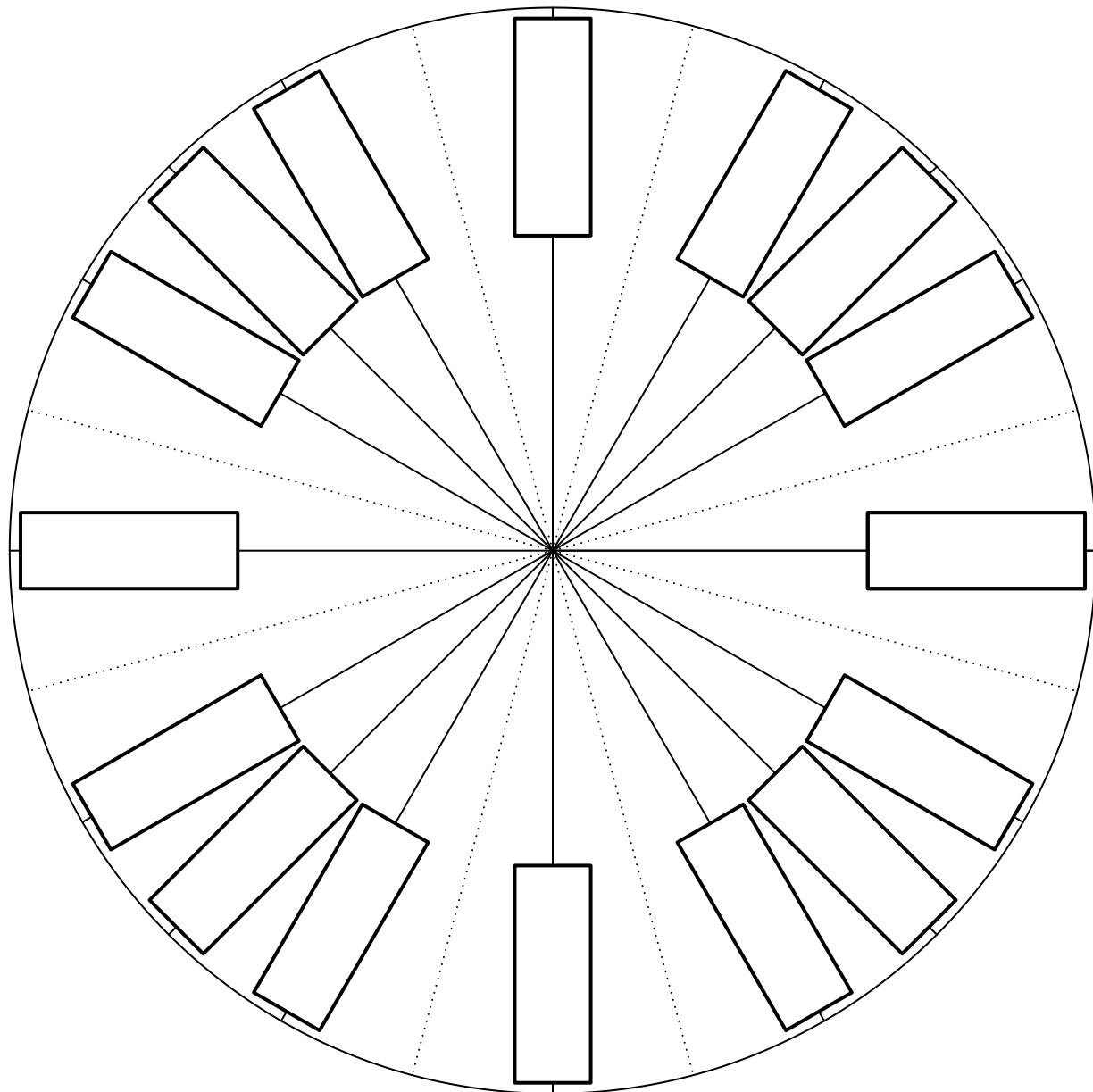
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 6 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

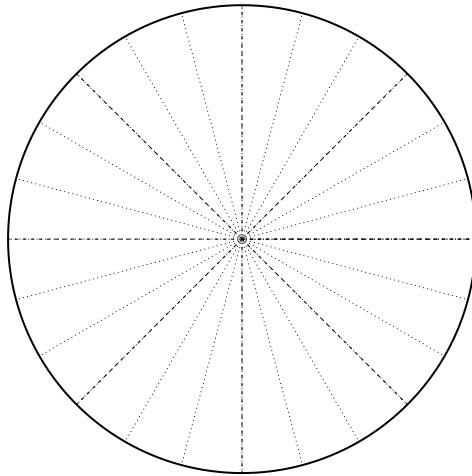
u12 Radians, Degrees, and Arc Length EXAM (version 139)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

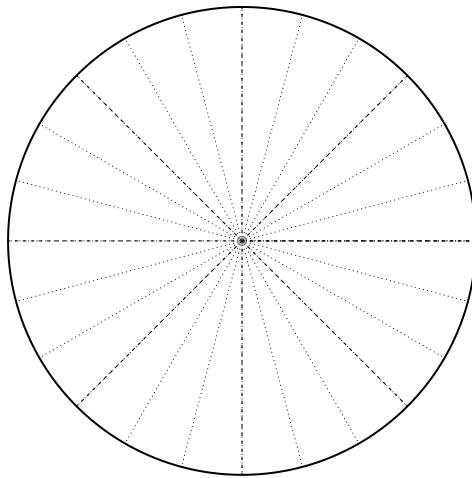


u12 Radians, Degrees, and Arc Length EXAM (version 139)

2. On the circle below, draw a sketch of a 810° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{17\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



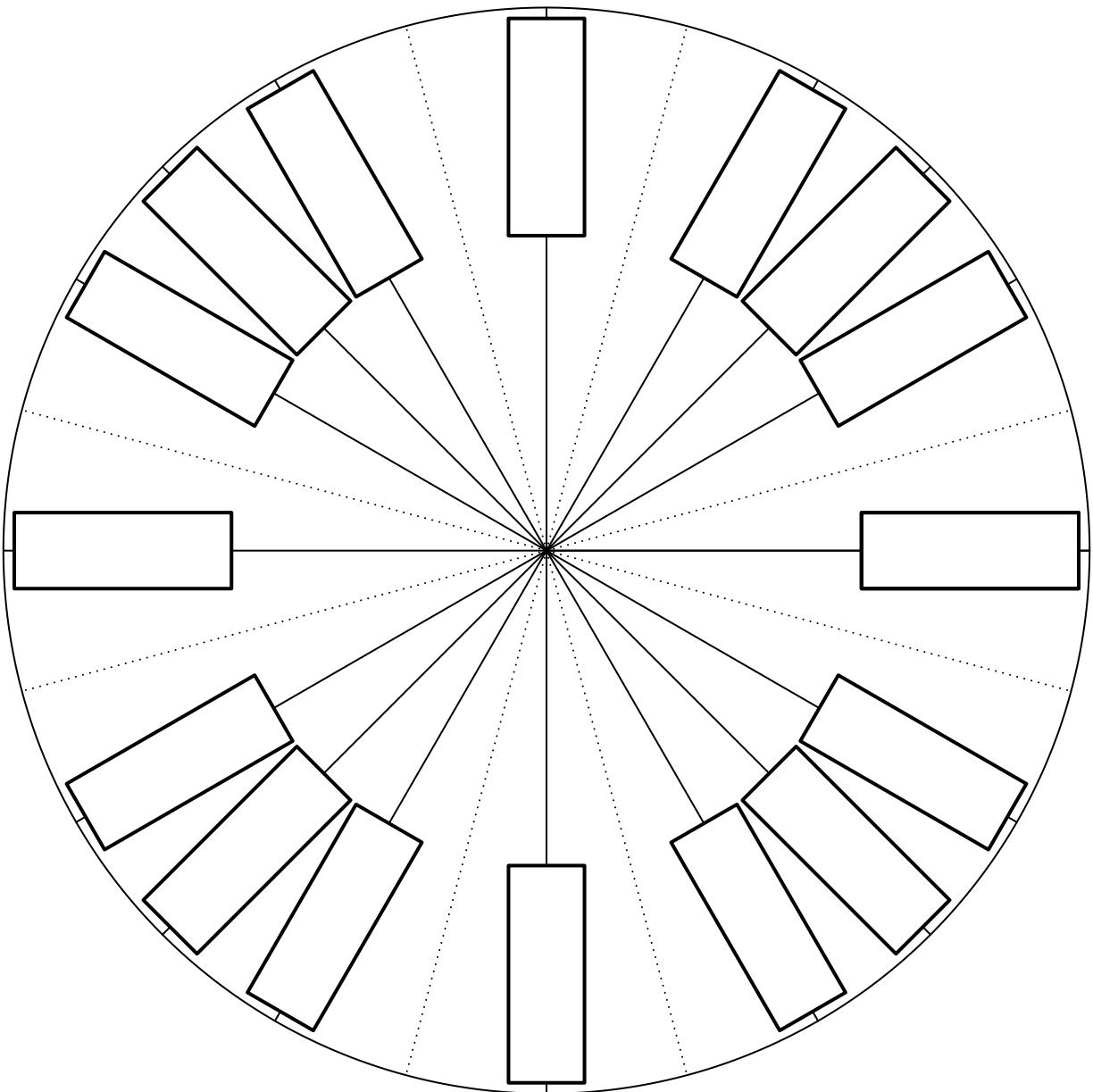
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

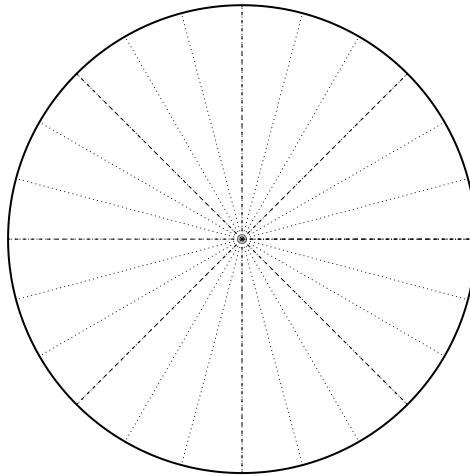
u12 Radians, Degrees, and Arc Length EXAM (version 140)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

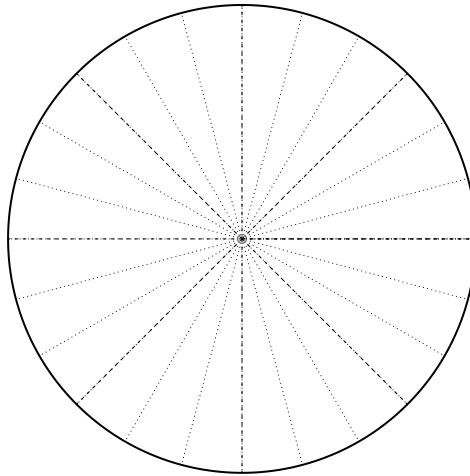


u12 Radians, Degrees, and Arc Length EXAM (version 140)

2. On the circle below, draw a sketch of a -1305° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{7\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



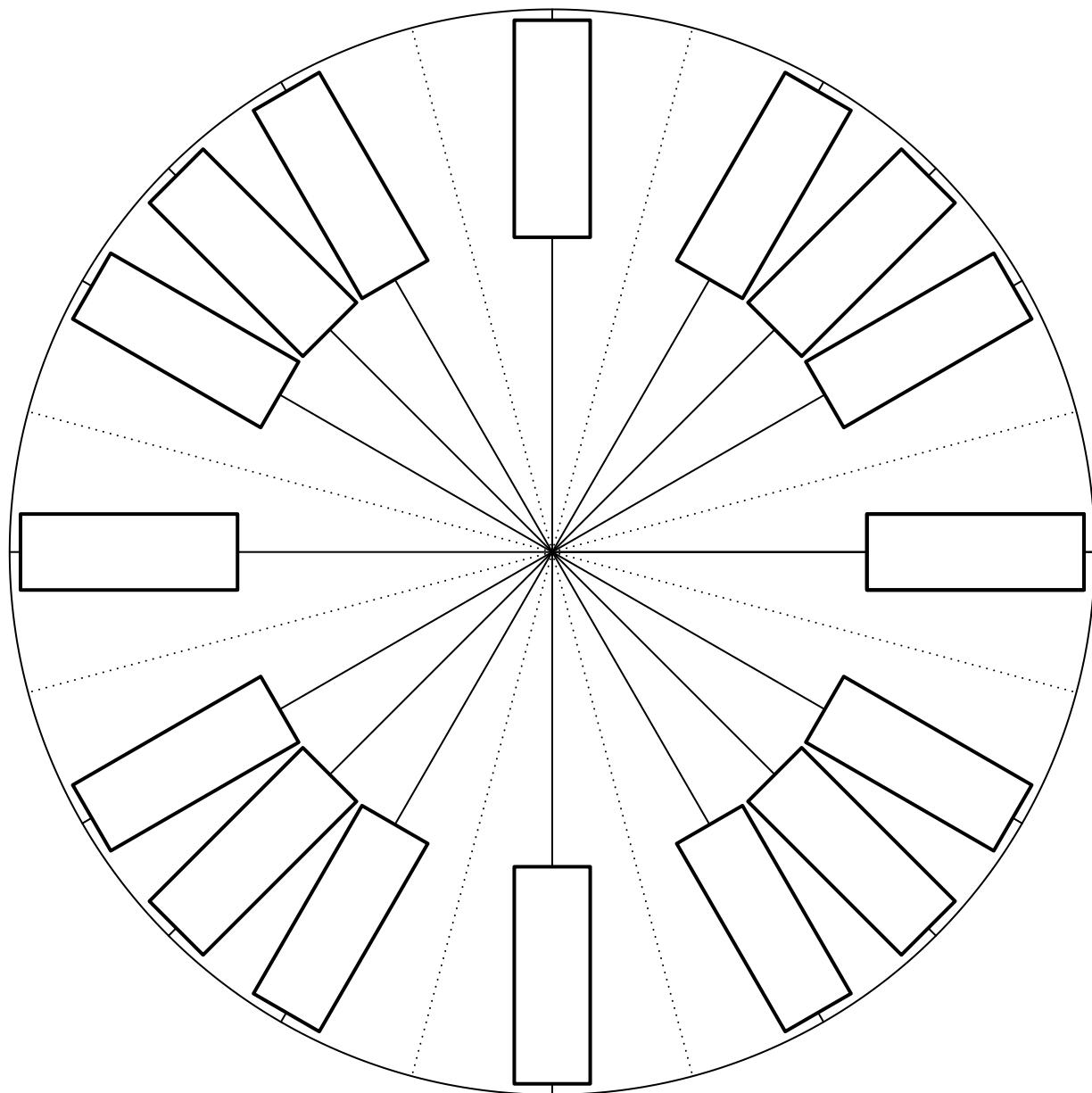
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 10 meters. Find r .

Name: _____

Date: _____

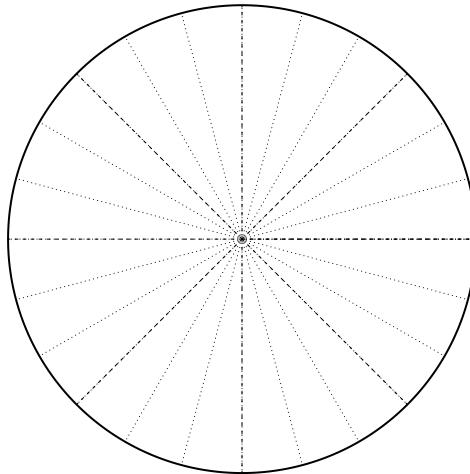
u12 Radians, Degrees, and Arc Length EXAM (version 141)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

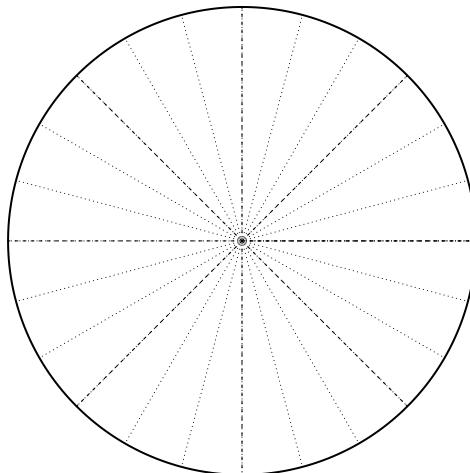


u12 Radians, Degrees, and Arc Length EXAM (version 141)

2. On the circle below, draw a sketch of a 945° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-25\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



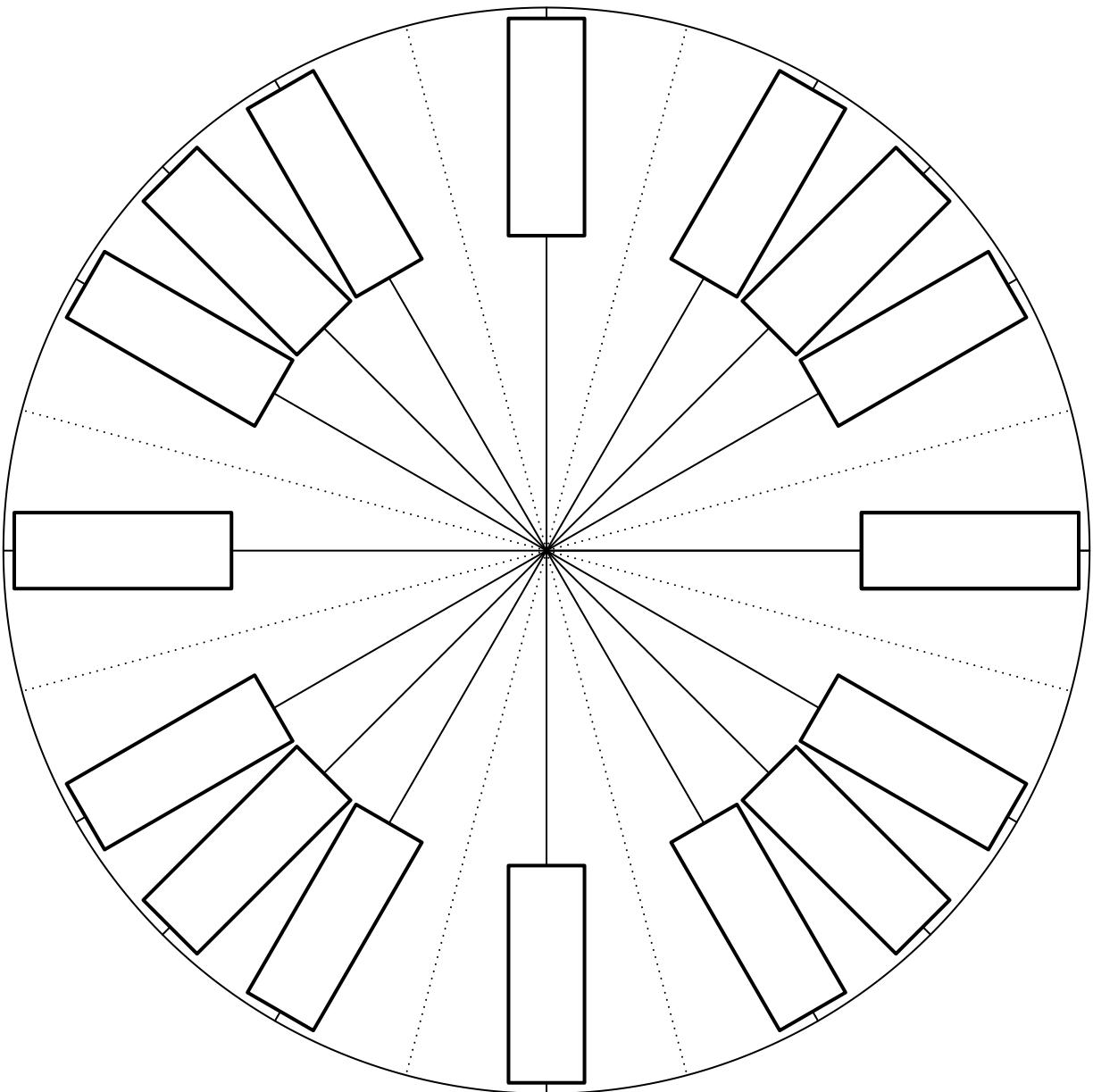
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 10 meters. Find r .

Name: _____

Date: _____

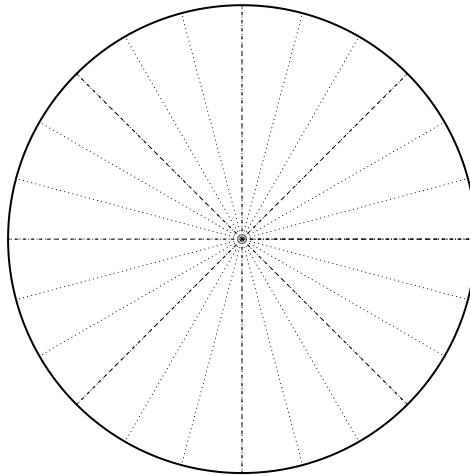
u12 Radians, Degrees, and Arc Length EXAM (version 142)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

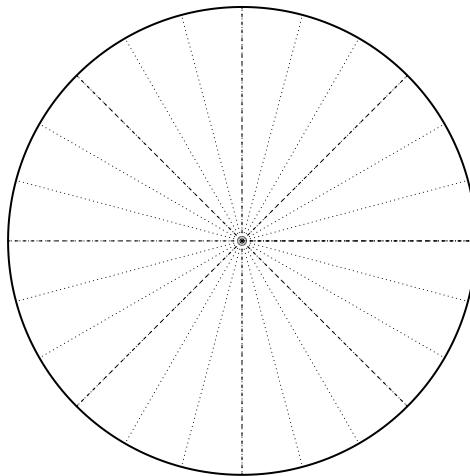


u12 Radians, Degrees, and Arc Length EXAM (version 142)

2. On the circle below, draw a sketch of a -450° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-43\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



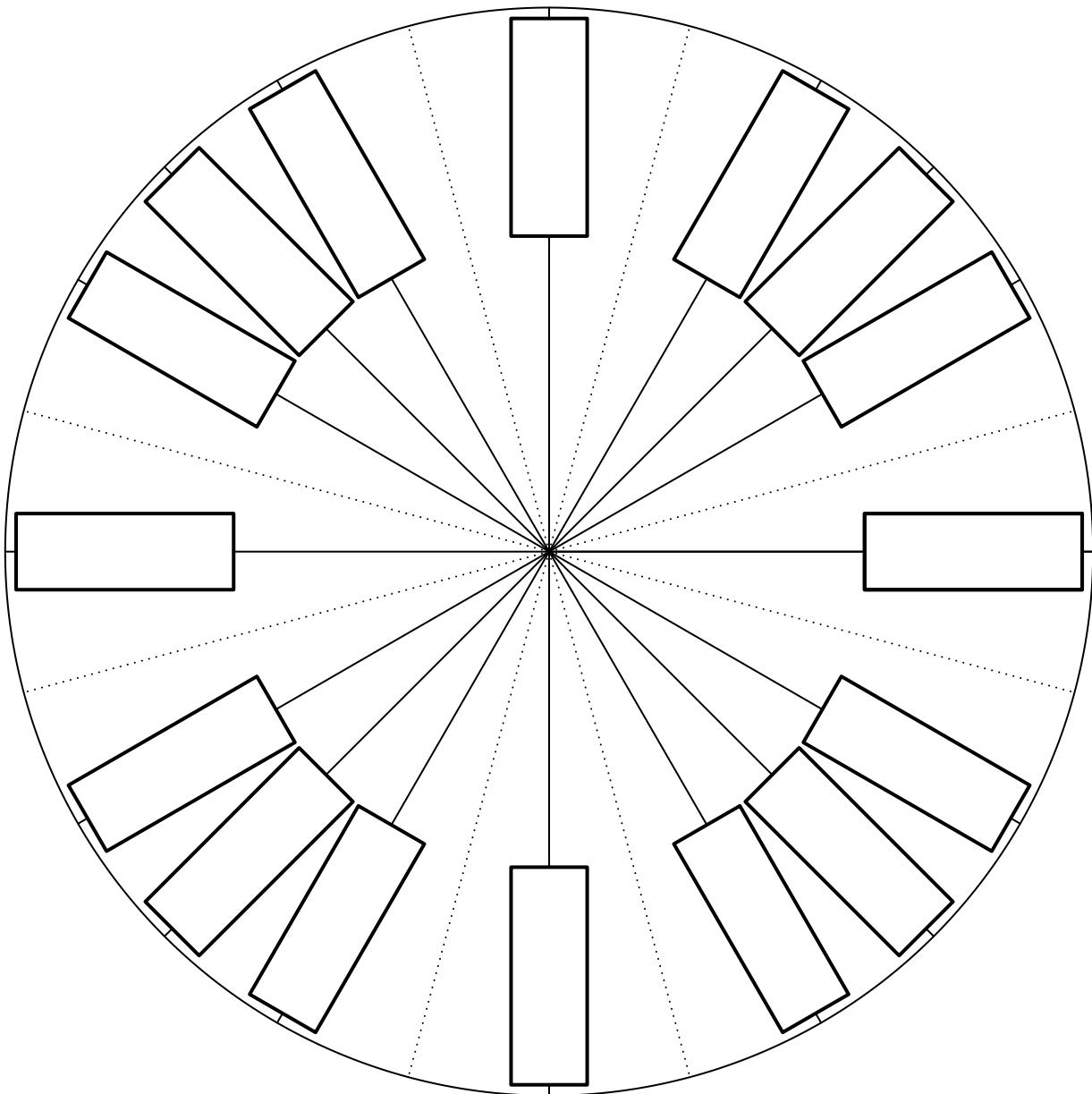
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 12 meters. Find θ .

Name: _____

Date: _____

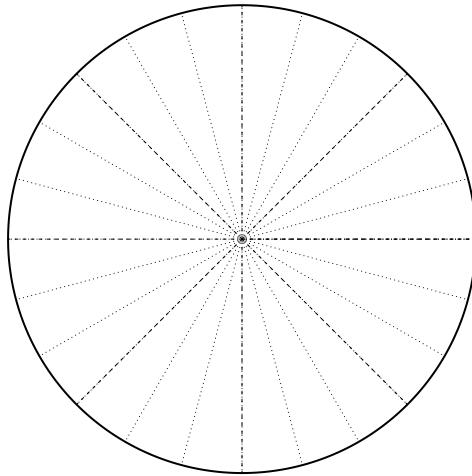
u12 Radians, Degrees, and Arc Length EXAM (version 143)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

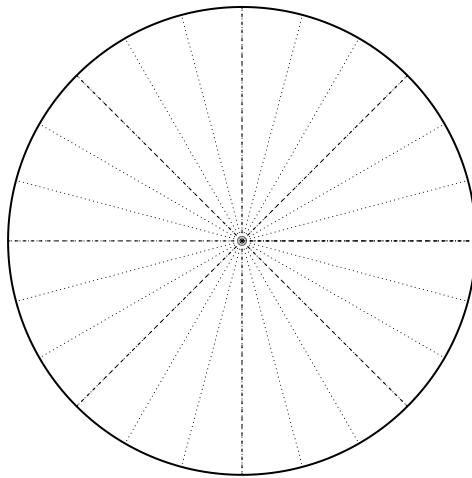


u12 Radians, Degrees, and Arc Length EXAM (version 143)

2. On the circle below, draw a sketch of a 810° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{11\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



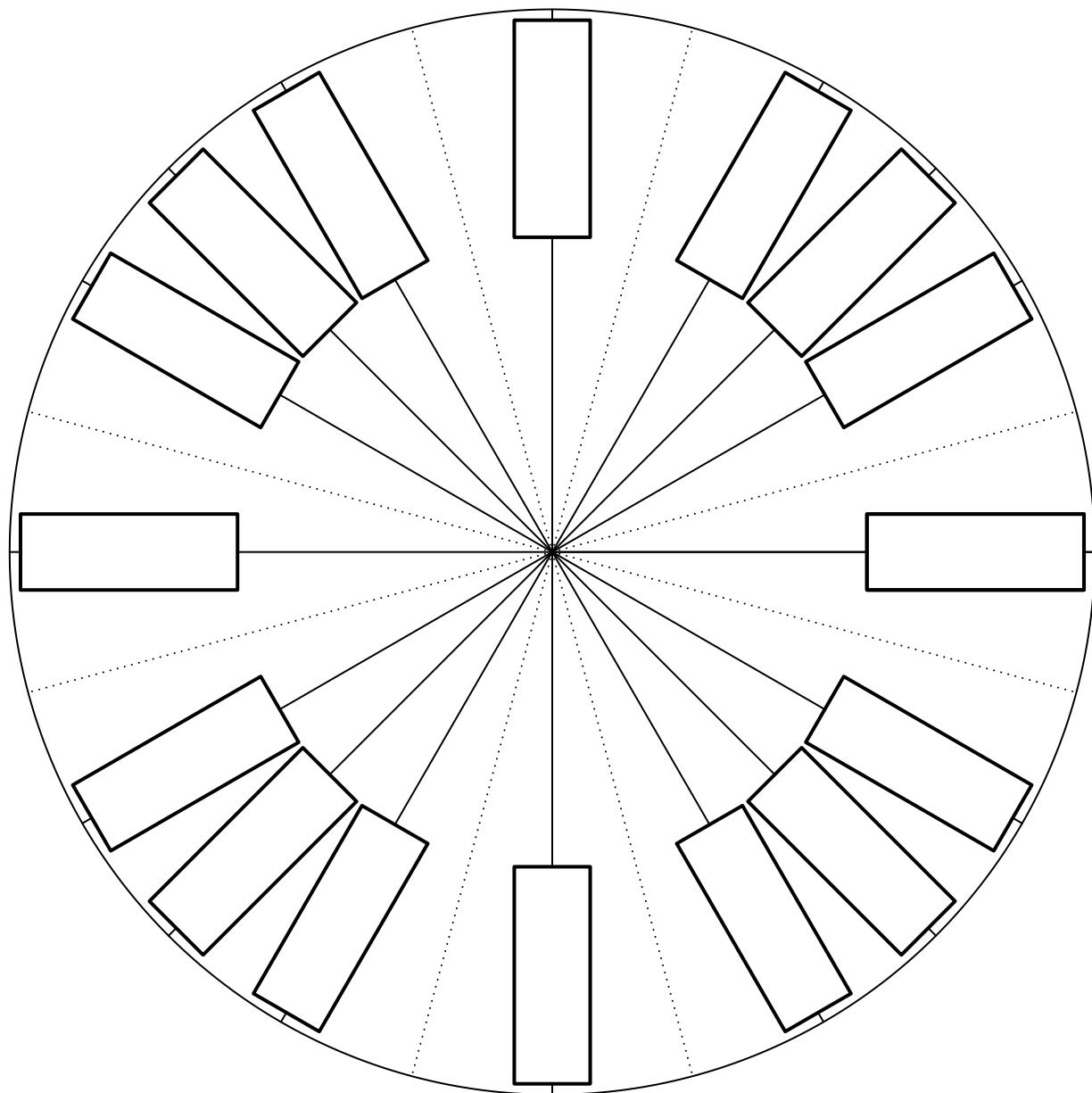
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 10 meters. Find r .

Name: _____

Date: _____

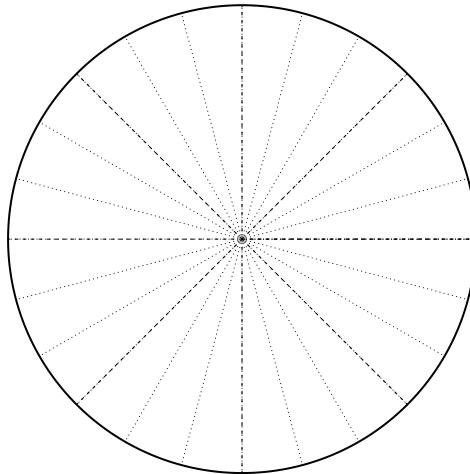
u12 Radians, Degrees, and Arc Length EXAM (version 144)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

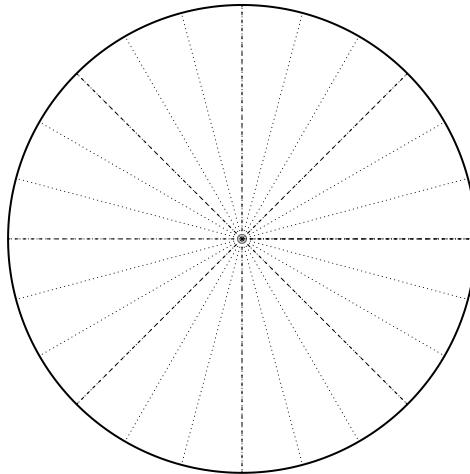


u12 Radians, Degrees, and Arc Length EXAM (version 144)

2. On the circle below, draw a sketch of a 1350° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-7\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



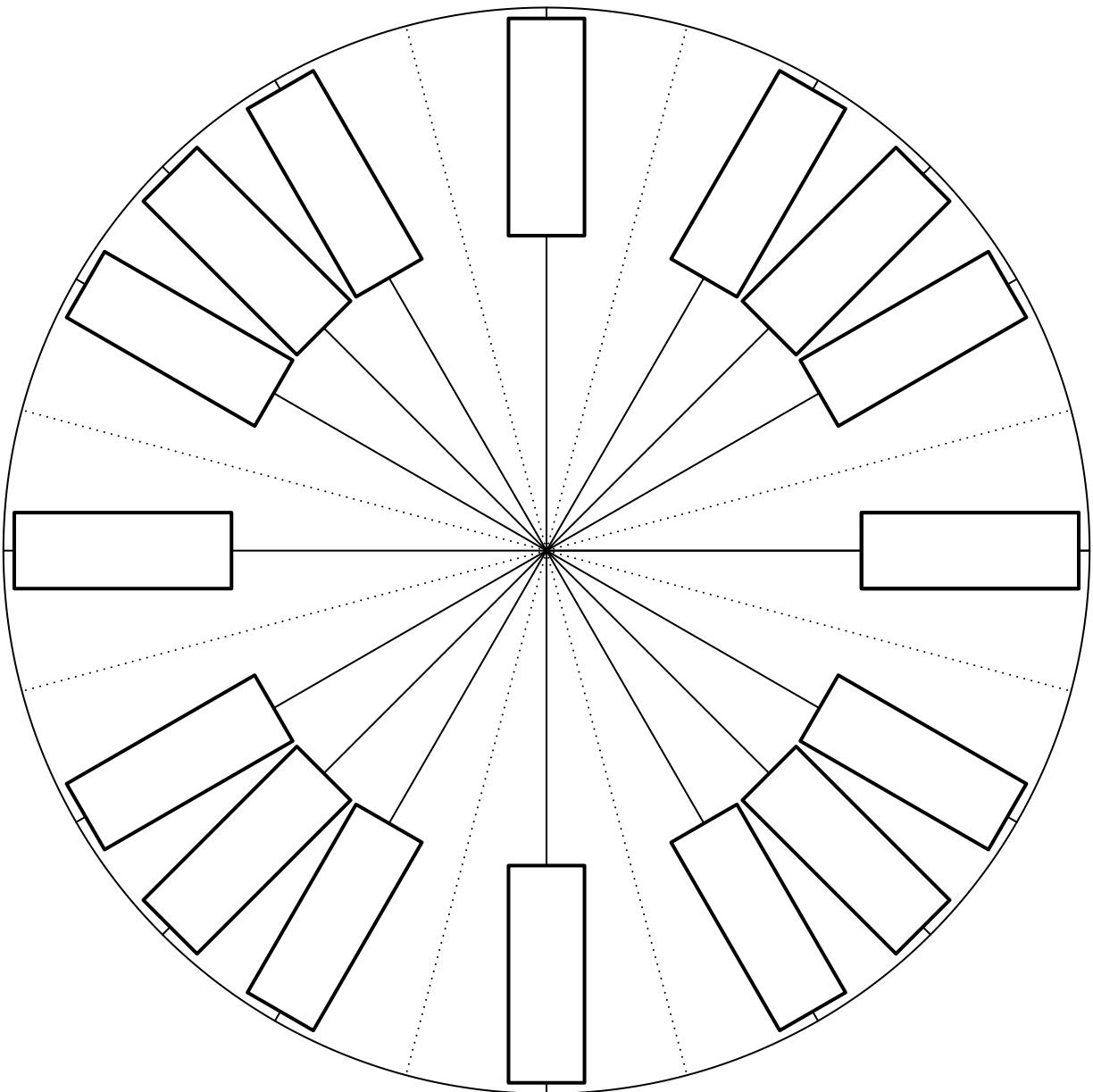
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

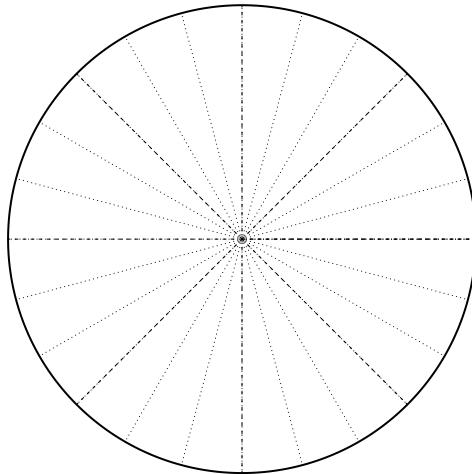
u12 Radians, Degrees, and Arc Length EXAM (version 145)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

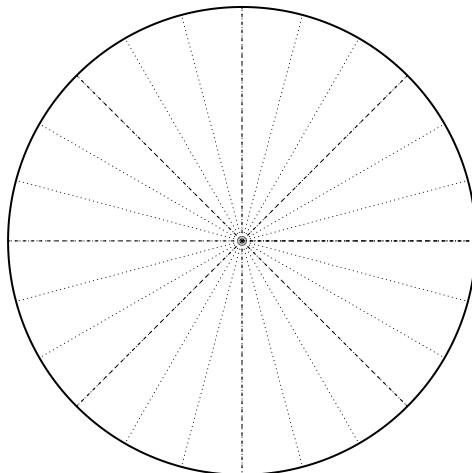


u12 Radians, Degrees, and Arc Length EXAM (version 145)

2. On the circle below, draw a sketch of a 855° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-7\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



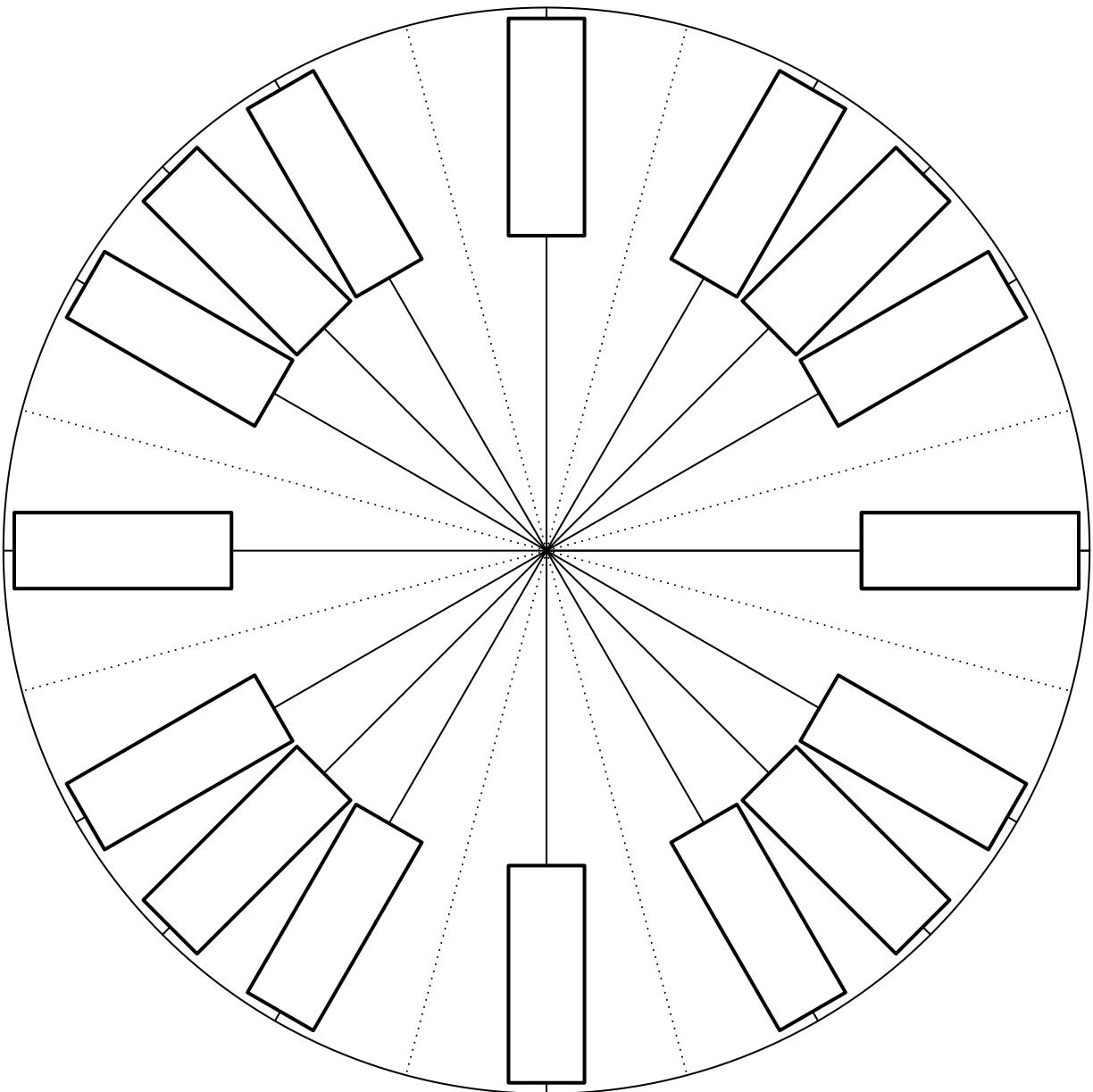
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

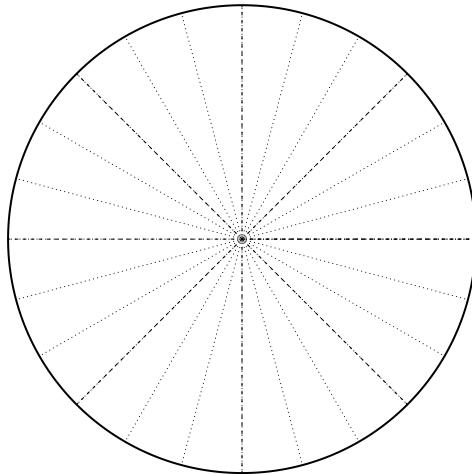
u12 Radians, Degrees, and Arc Length EXAM (version 146)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

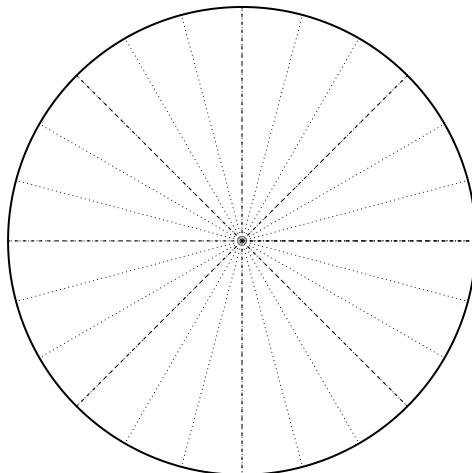


u12 Radians, Degrees, and Arc Length EXAM (version 146)

2. On the circle below, draw a sketch of a -930° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{9\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



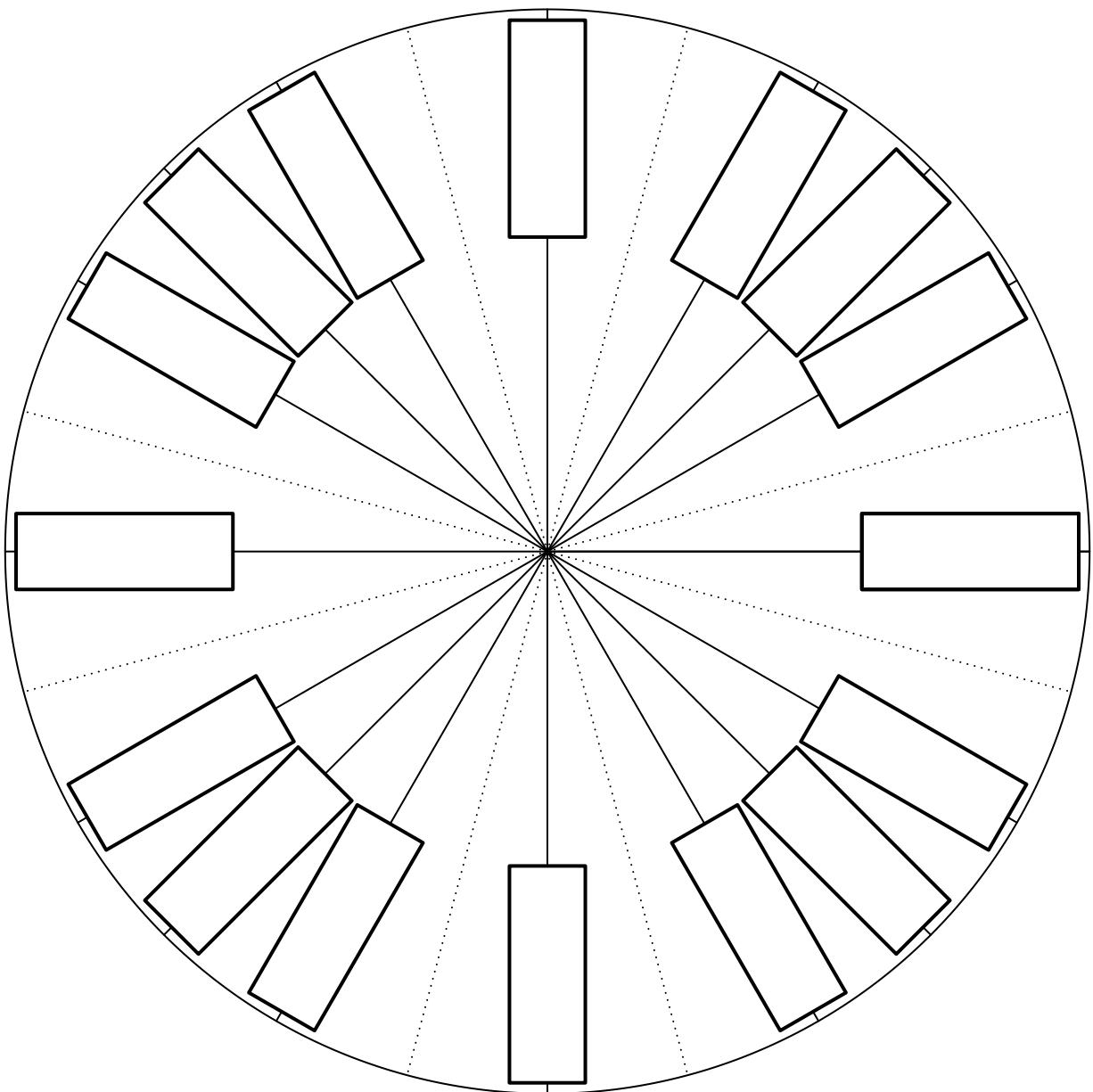
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 20 meters. Find r .

Name: _____

Date: _____

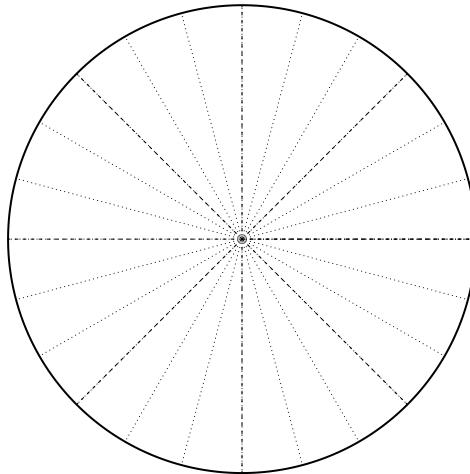
u12 Radians, Degrees, and Arc Length EXAM (version 147)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

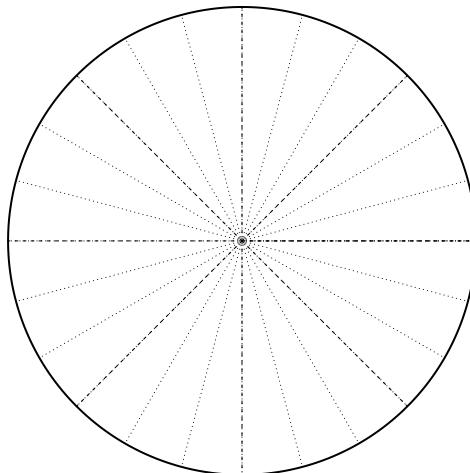


u12 Radians, Degrees, and Arc Length EXAM (version 147)

2. On the circle below, draw a sketch of a -405° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{7\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



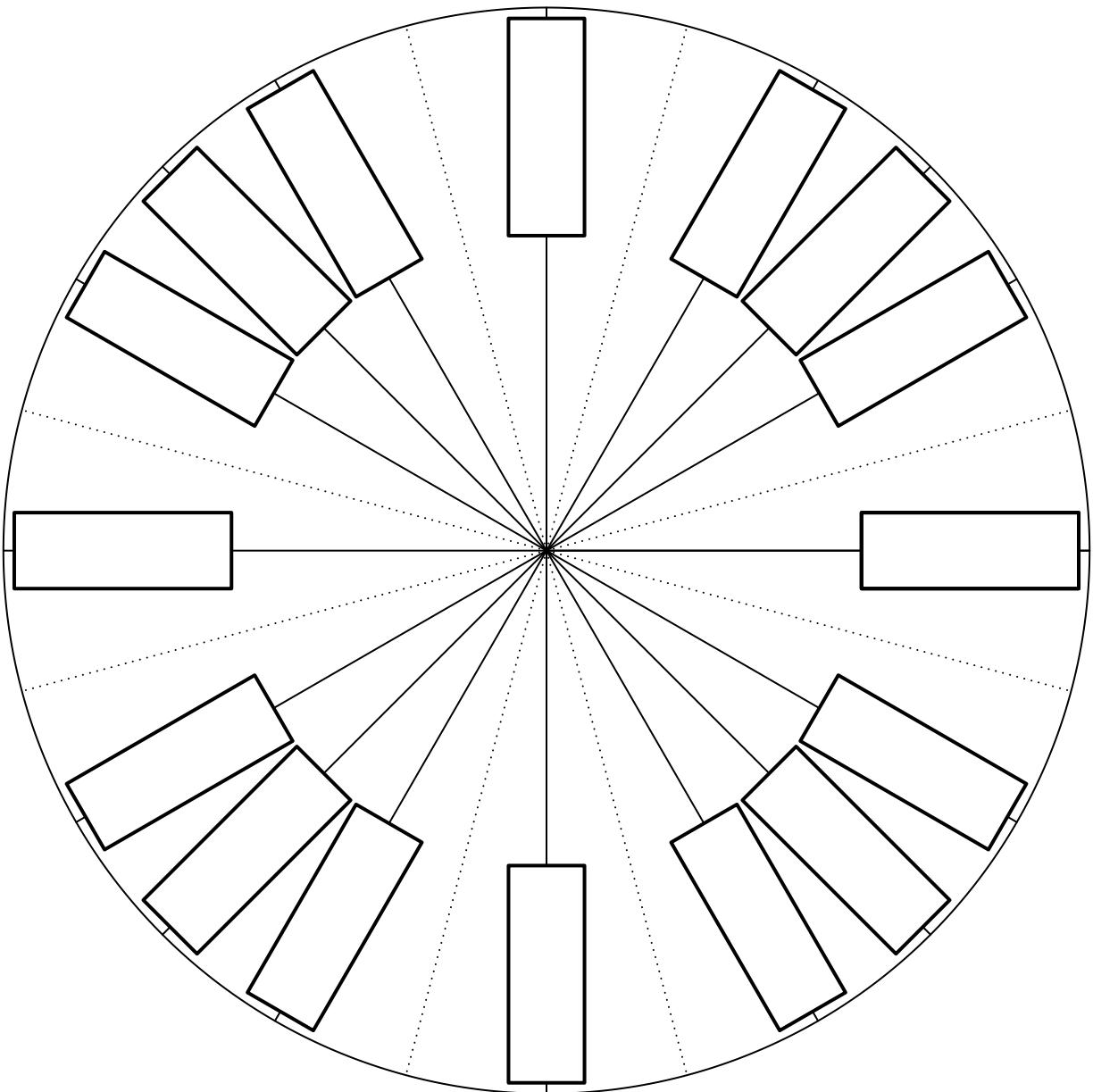
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 6 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

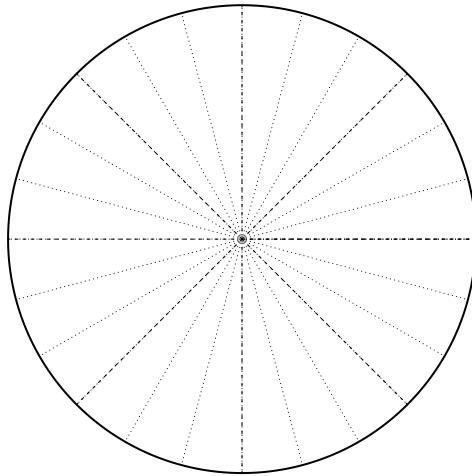
u12 Radians, Degrees, and Arc Length EXAM (version 148)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

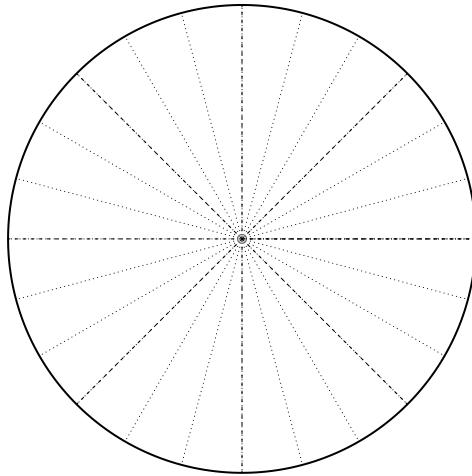


u12 Radians, Degrees, and Arc Length EXAM (version 148)

2. On the circle below, draw a sketch of a -1200° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-13\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



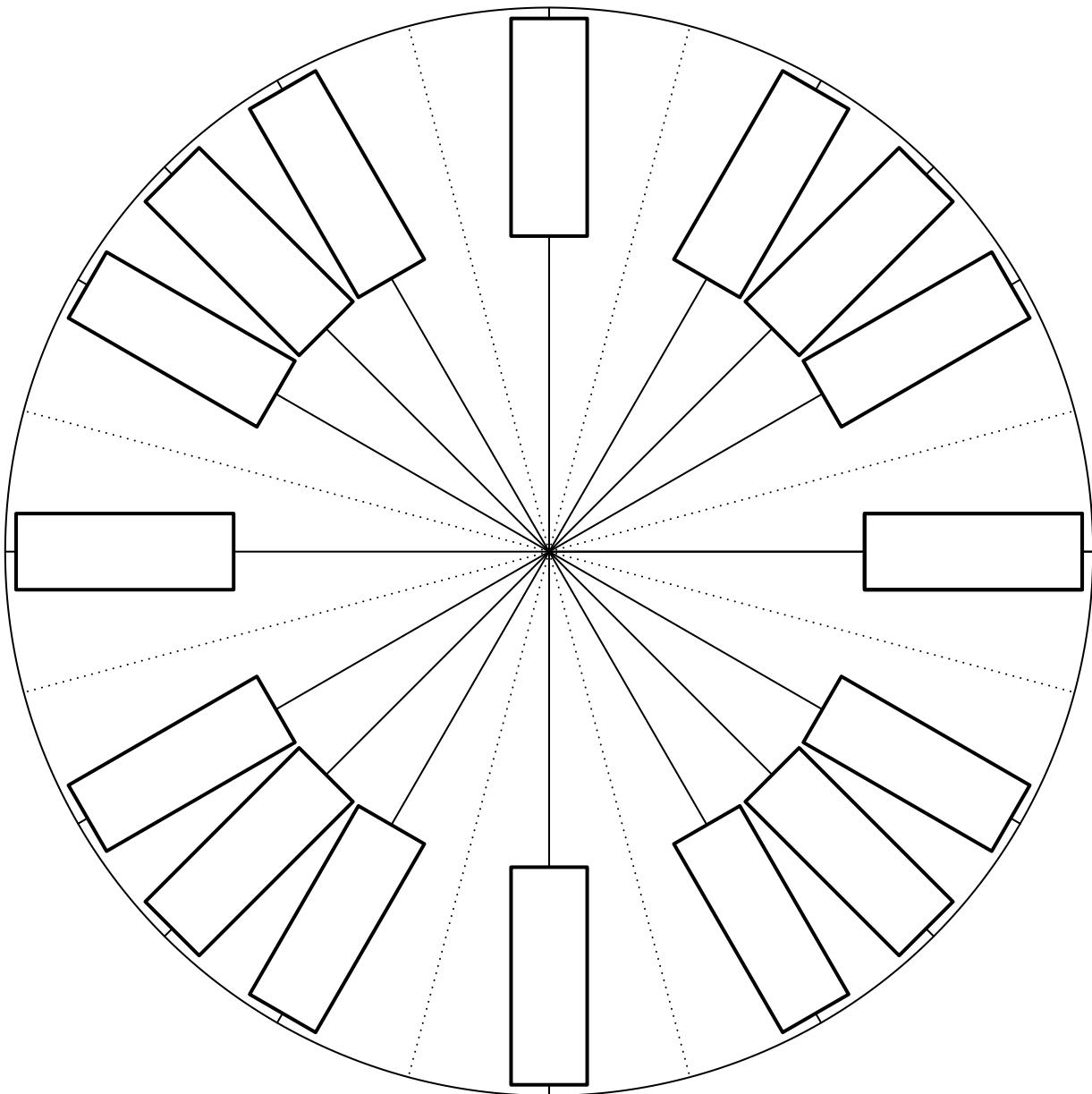
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals θ radians. The arc length equals 12 meters. Find θ .

Name: _____

Date: _____

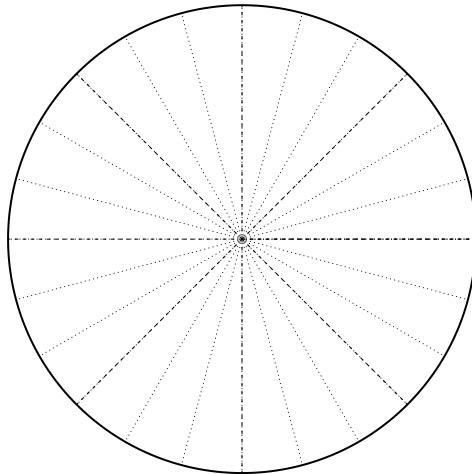
u12 Radians, Degrees, and Arc Length EXAM (version 149)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

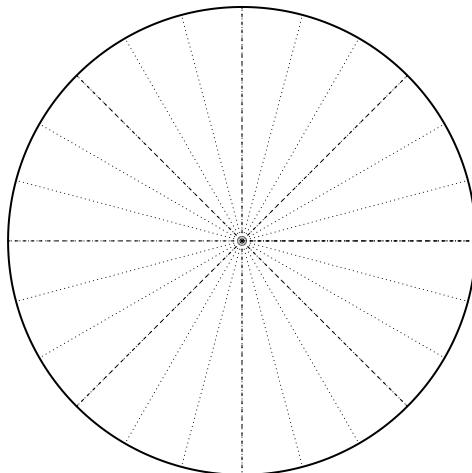


u12 Radians, Degrees, and Arc Length EXAM (version 149)

2. On the circle below, draw a sketch of a -1050° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{15\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



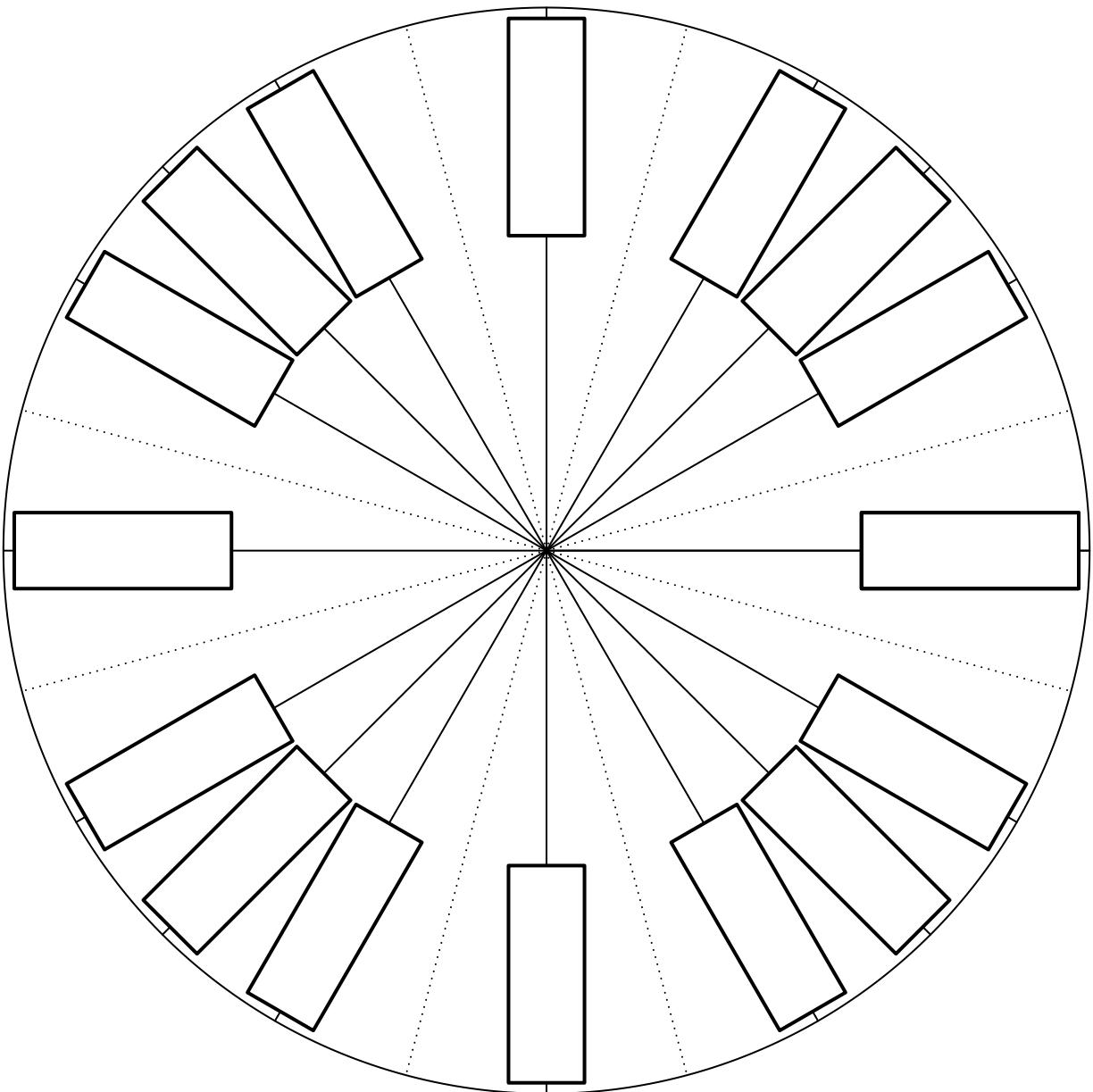
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 18 meters. Find r .

Name: _____

Date: _____

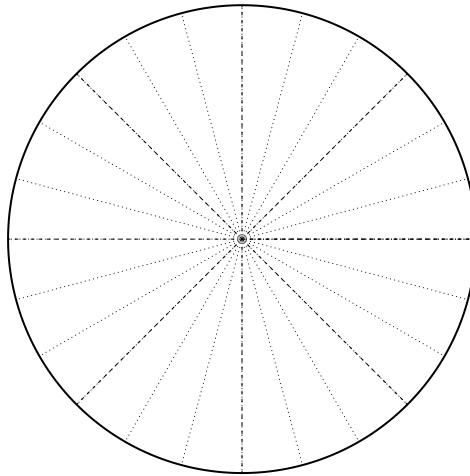
u12 Radians, Degrees, and Arc Length EXAM (version 150)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

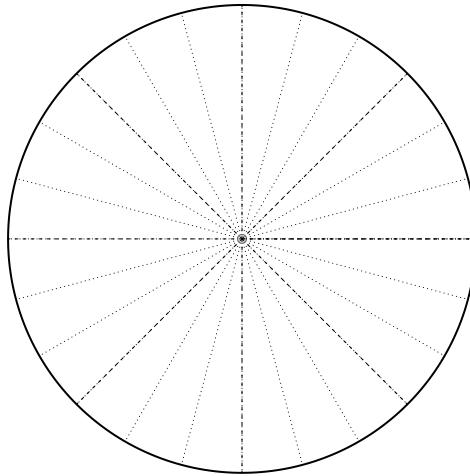


u12 Radians, Degrees, and Arc Length EXAM (version 150)

2. On the circle below, draw a sketch of a -1410° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{7\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



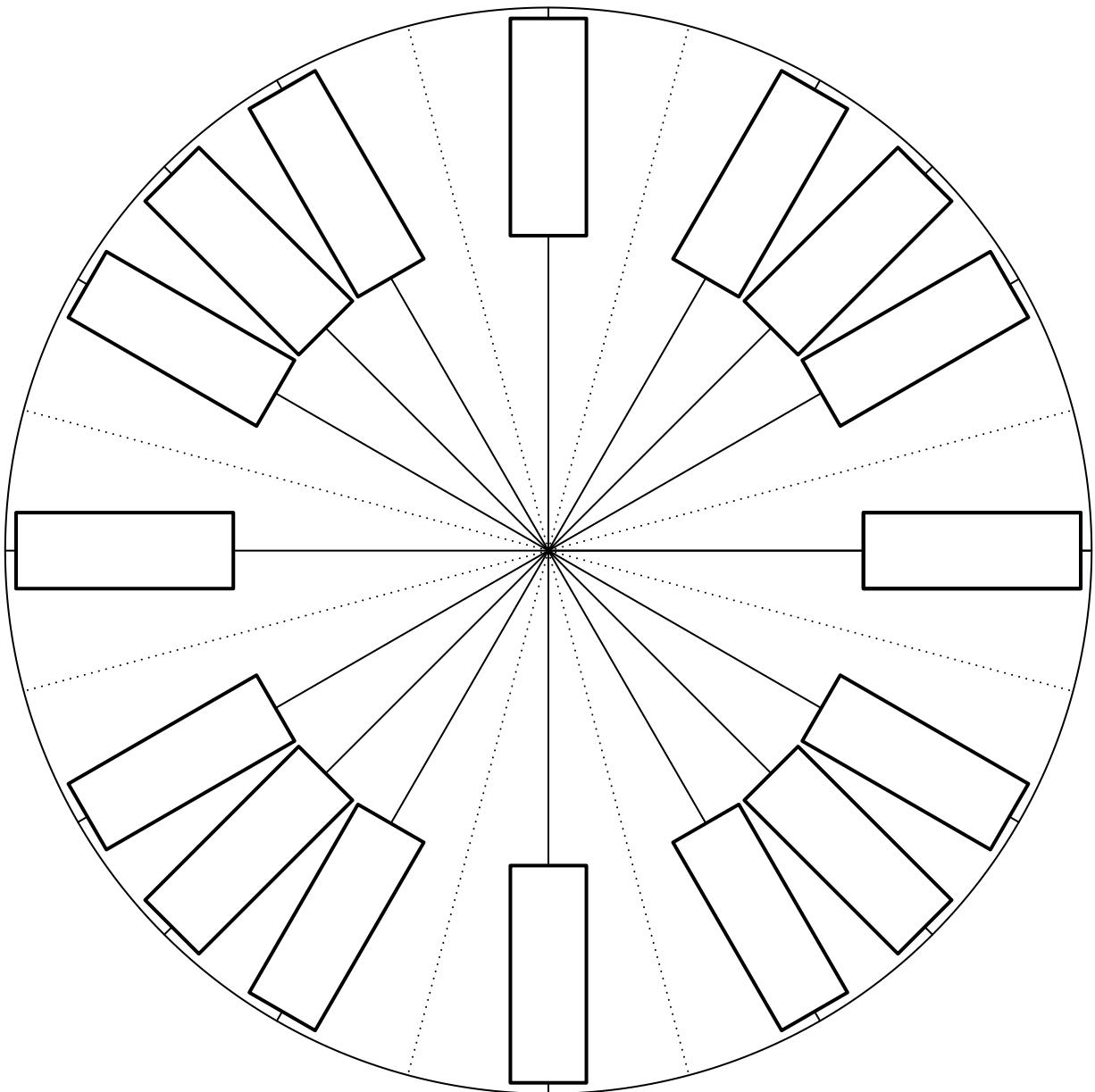
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

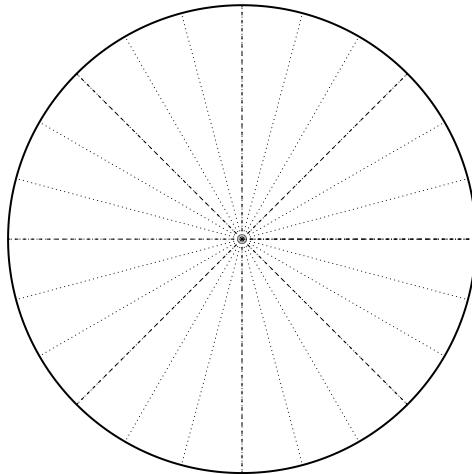
u12 Radians, Degrees, and Arc Length EXAM (version 151)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

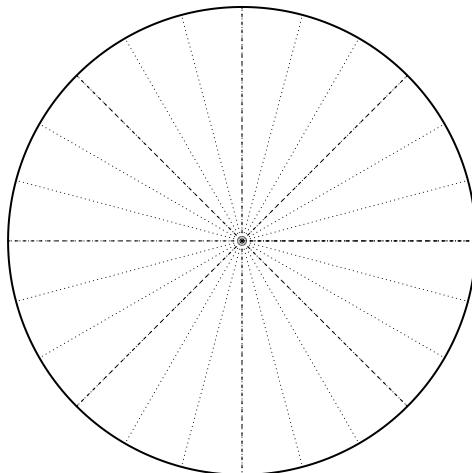


u12 Radians, Degrees, and Arc Length EXAM (version 151)

2. On the circle below, draw a sketch of a -1035° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{17\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



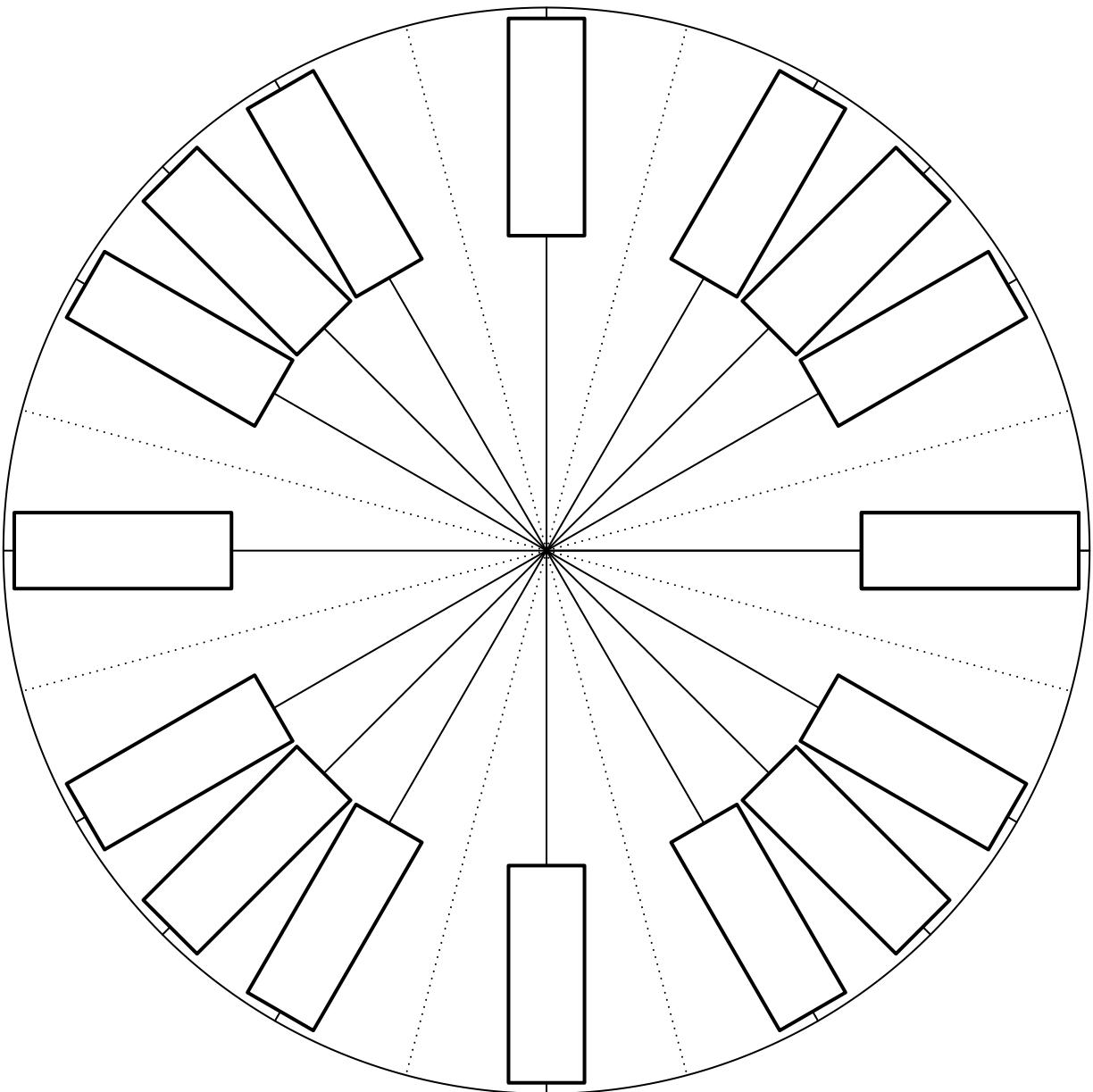
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 6 radians. The arc length equals 24 meters. Find r .

Name: _____

Date: _____

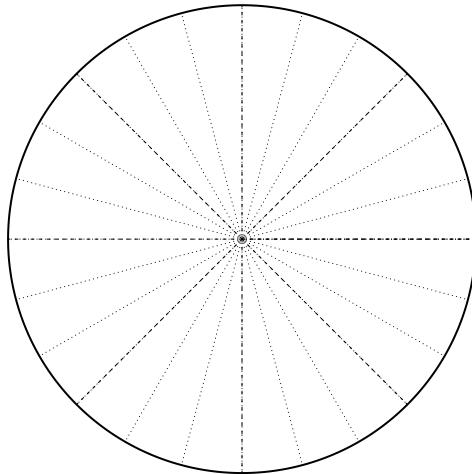
u12 Radians, Degrees, and Arc Length EXAM (version 152)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

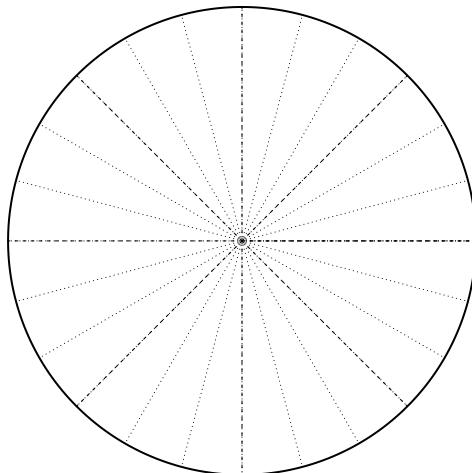


u12 Radians, Degrees, and Arc Length EXAM (version 152)

2. On the circle below, draw a sketch of a -495° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{23\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



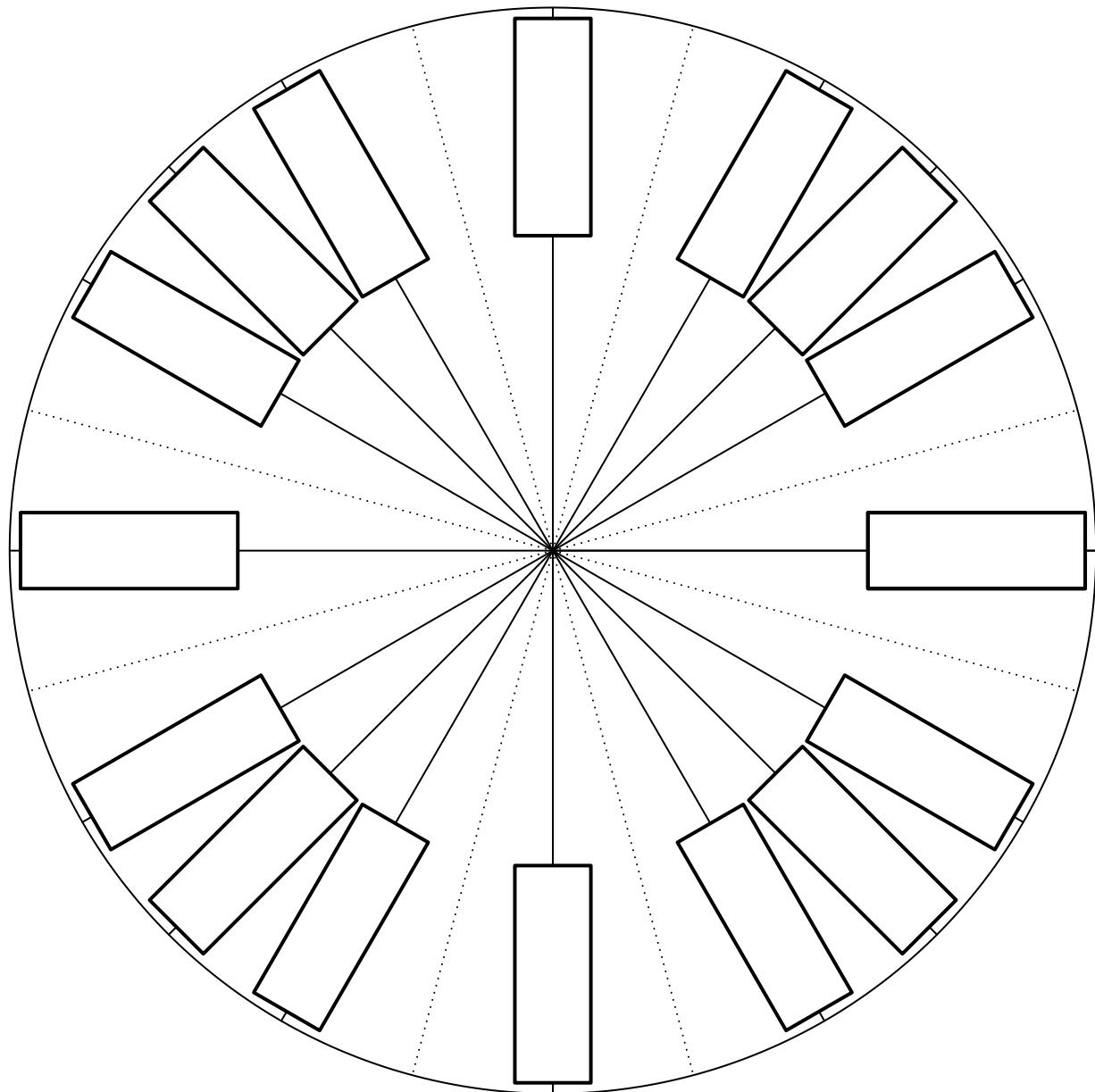
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 10 meters. Find θ .

Name: _____

Date: _____

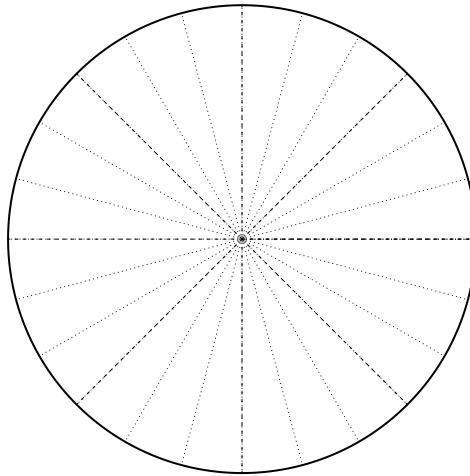
u12 Radians, Degrees, and Arc Length EXAM (version 153)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

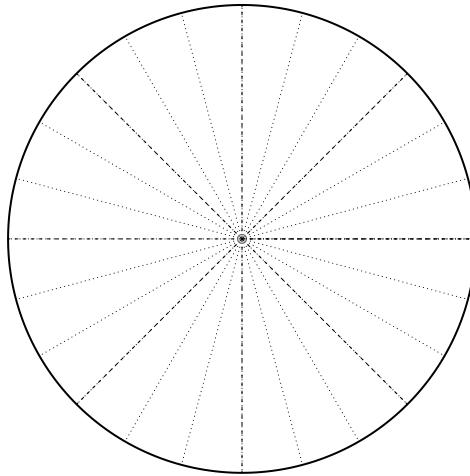


u12 Radians, Degrees, and Arc Length EXAM (version 153)

2. On the circle below, draw a sketch of a -1125° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{7\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



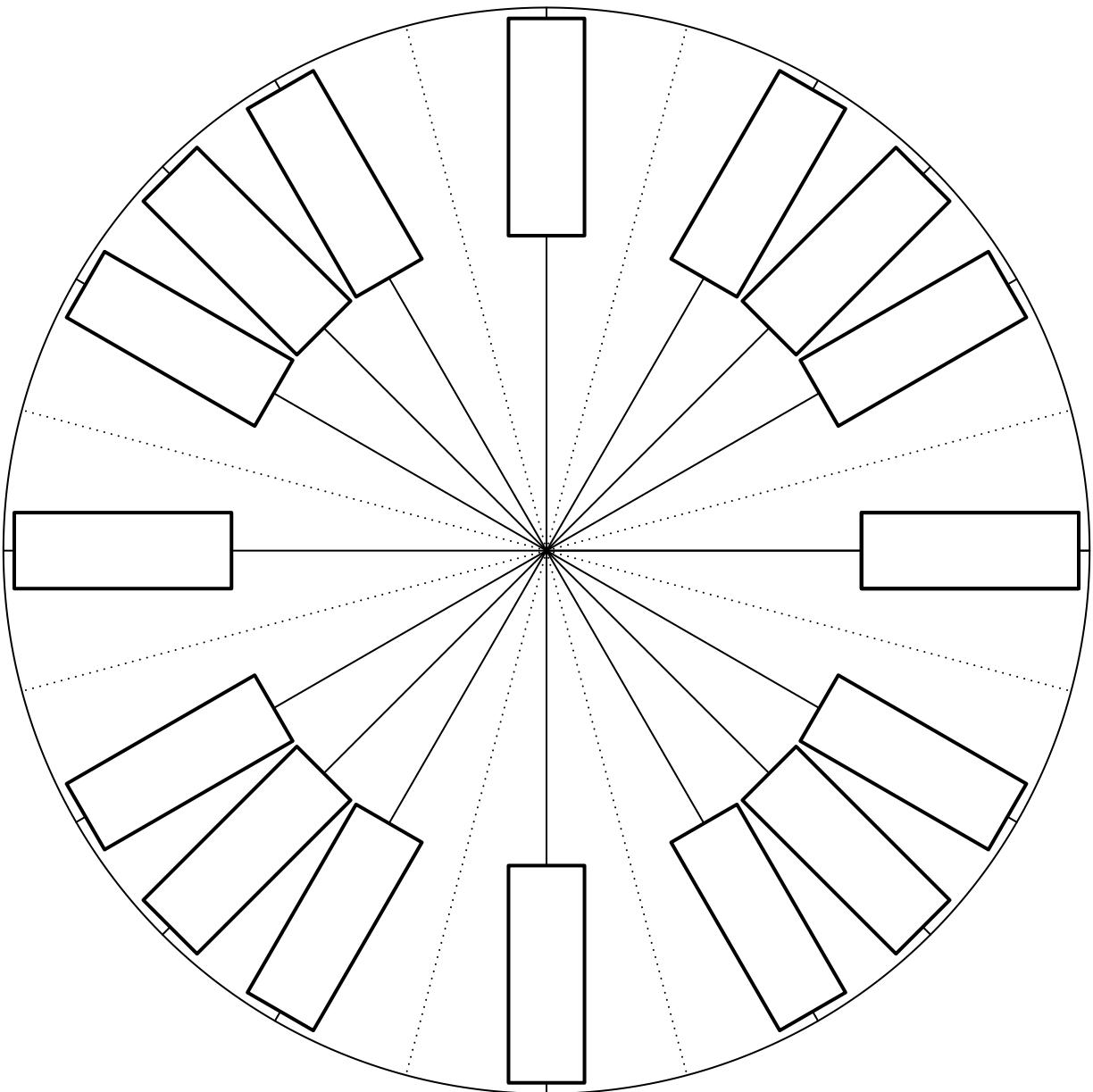
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

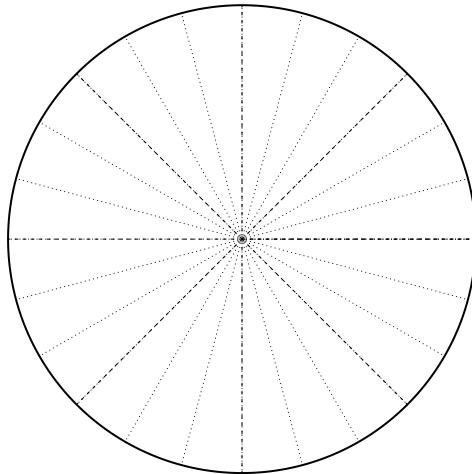
u12 Radians, Degrees, and Arc Length EXAM (version 154)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

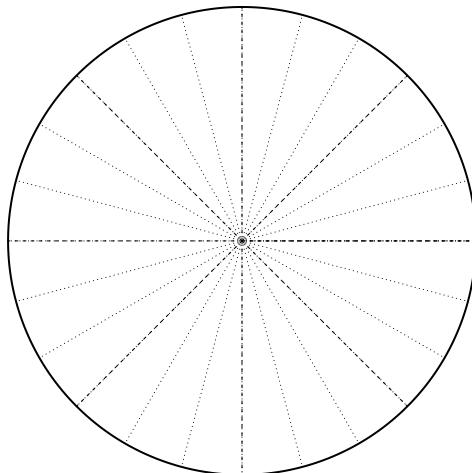


u12 Radians, Degrees, and Arc Length EXAM (version 154)

2. On the circle below, draw a sketch of a 810° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-43\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



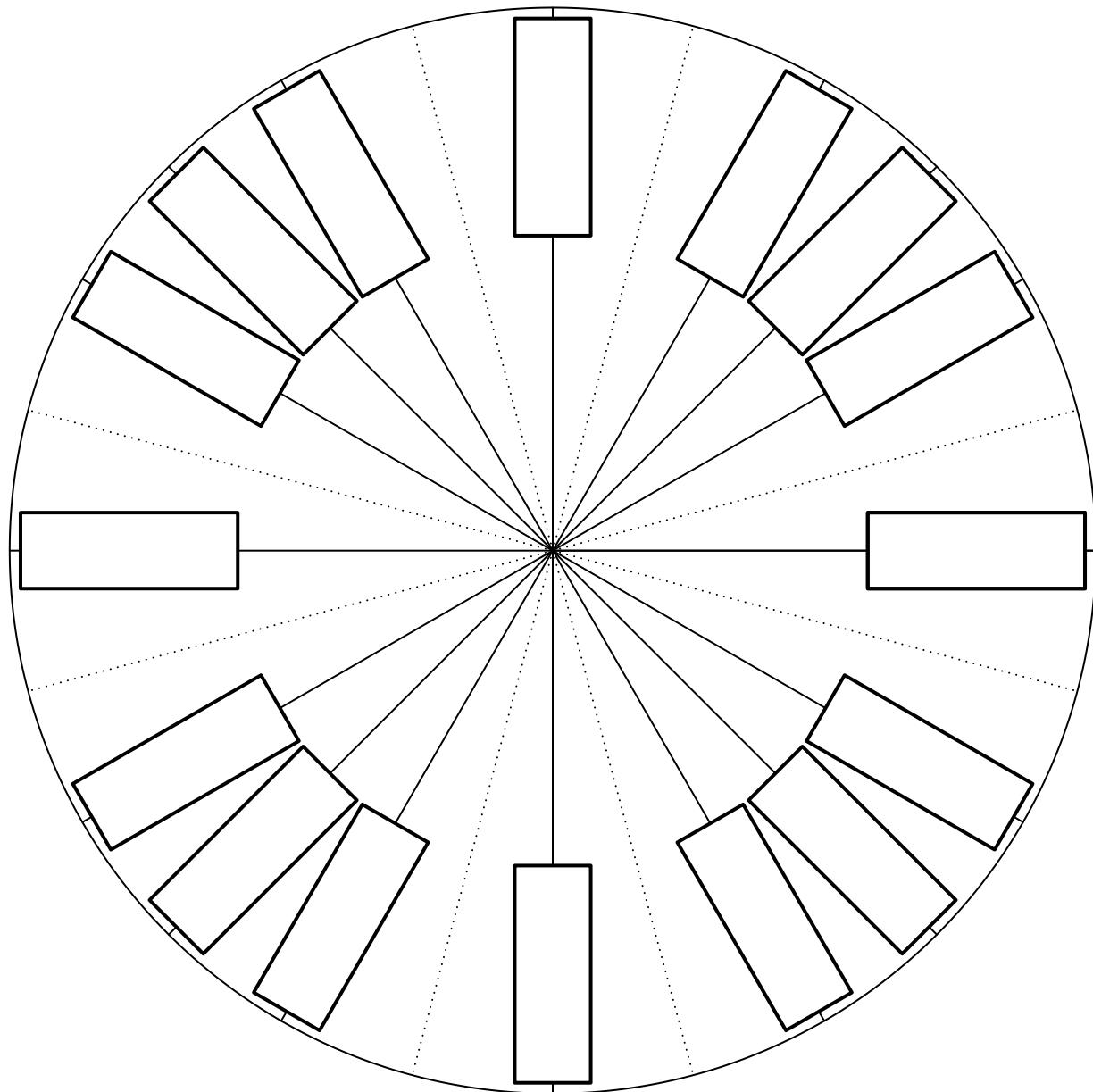
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

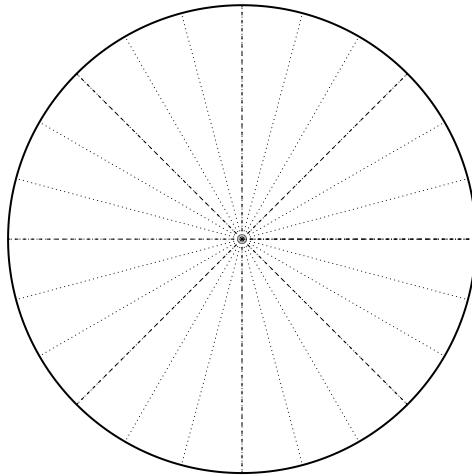
u12 Radians, Degrees, and Arc Length EXAM (version 155)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

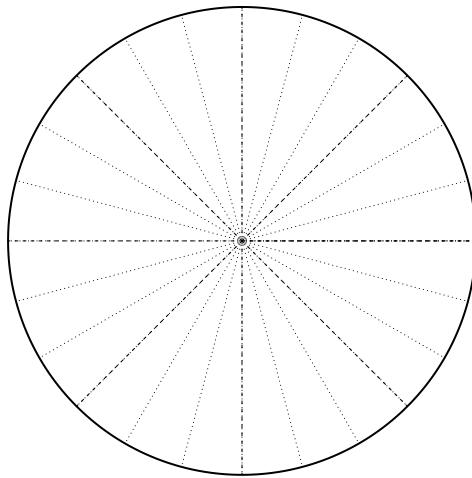


u12 Radians, Degrees, and Arc Length EXAM (version 155)

2. On the circle below, draw a sketch of a 1050° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-10\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



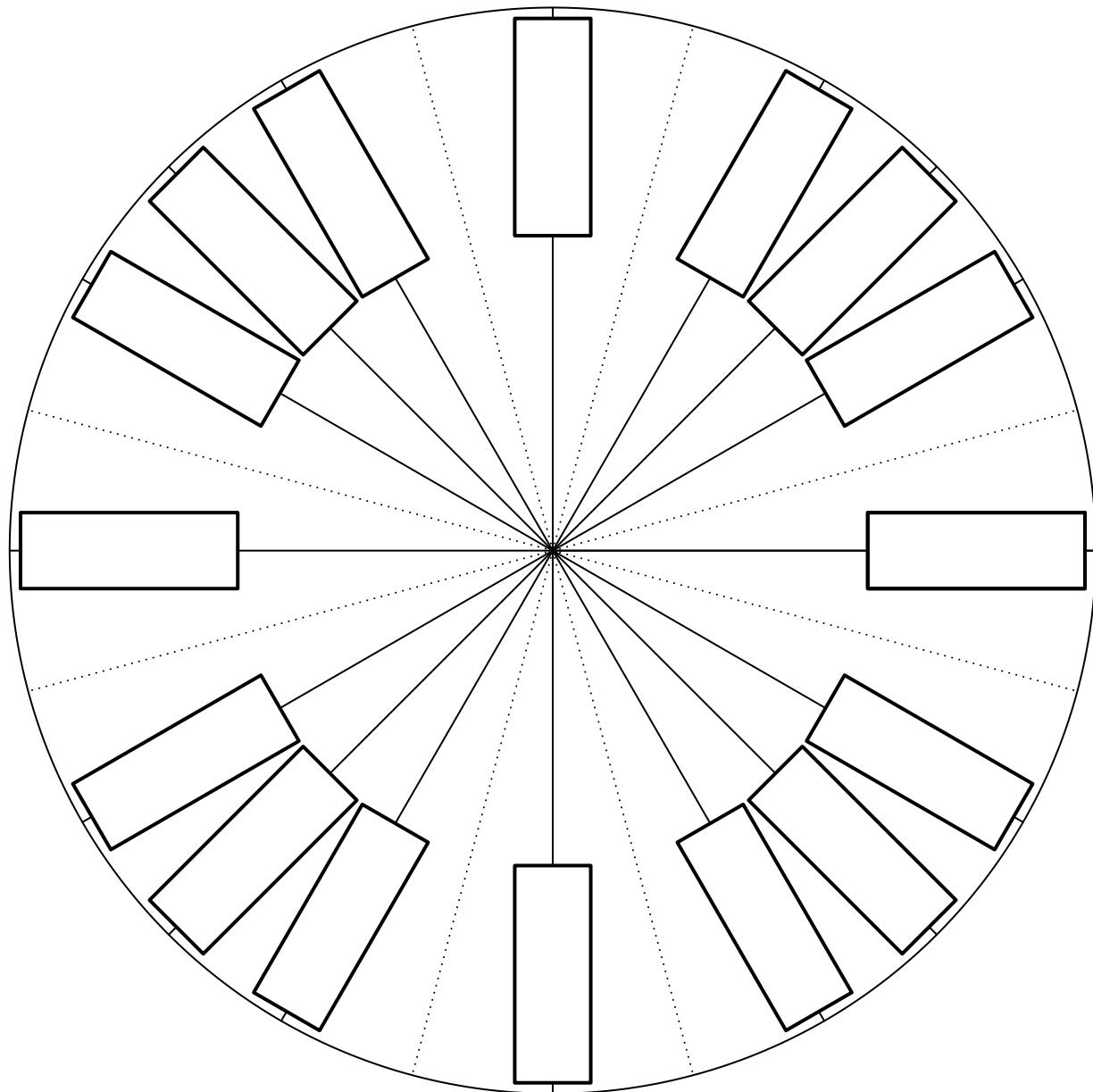
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 30 meters. Find θ .

Name: _____

Date: _____

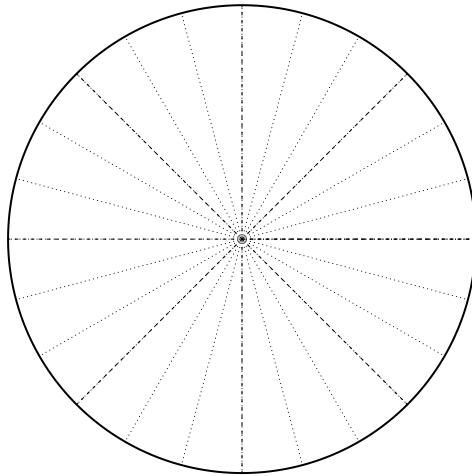
u12 Radians, Degrees, and Arc Length EXAM (version 156)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

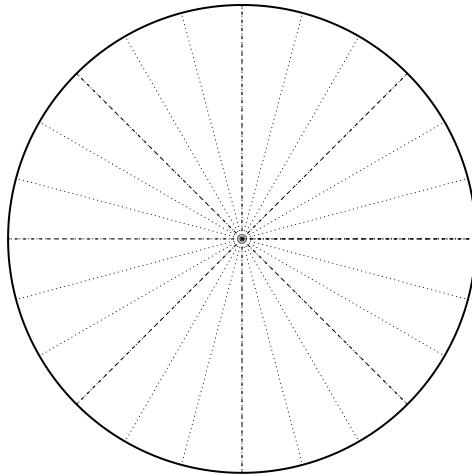


u12 Radians, Degrees, and Arc Length EXAM (version 156)

2. On the circle below, draw a sketch of a 1200° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-20\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



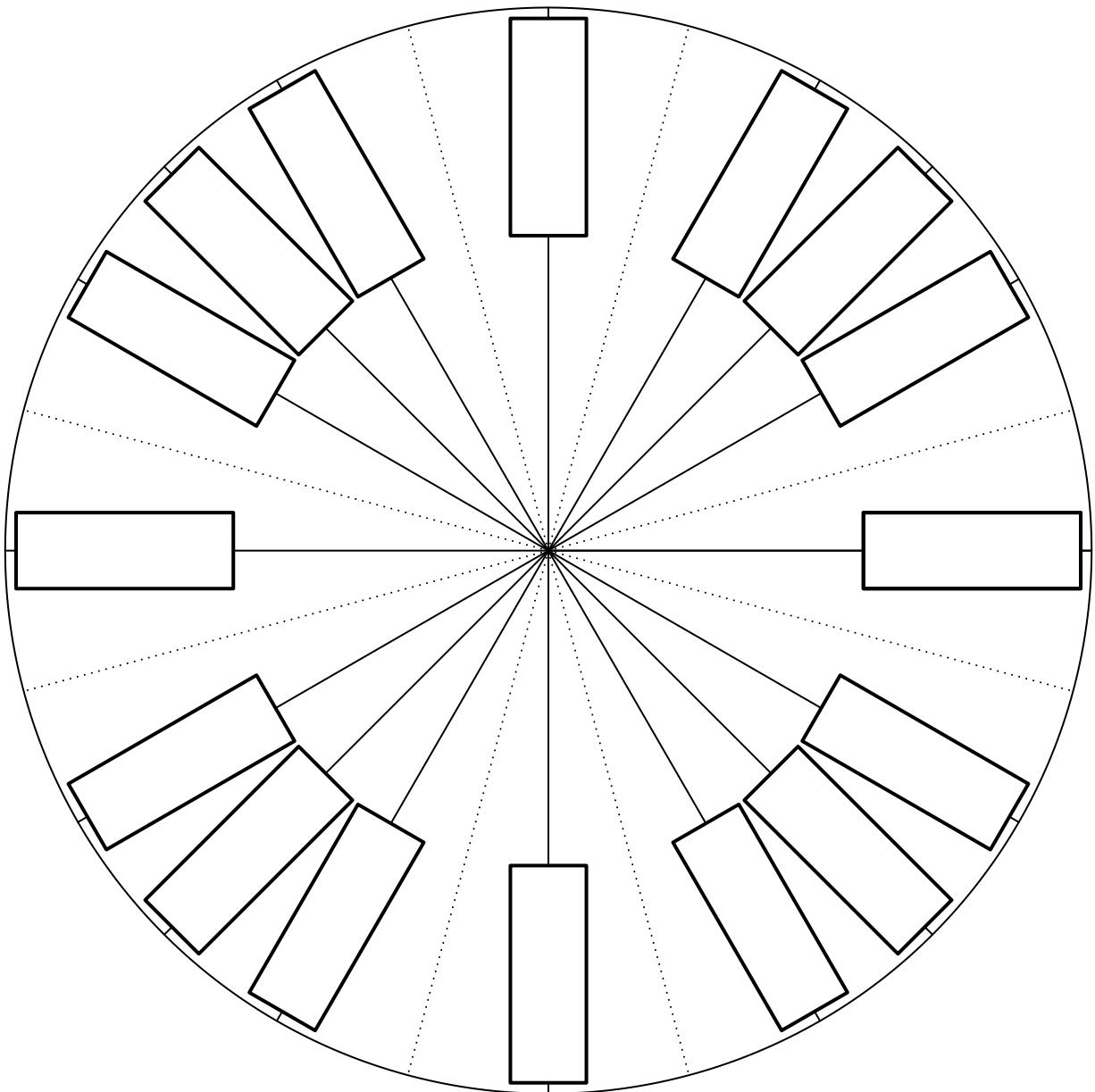
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 20 meters. Find θ .

Name: _____

Date: _____

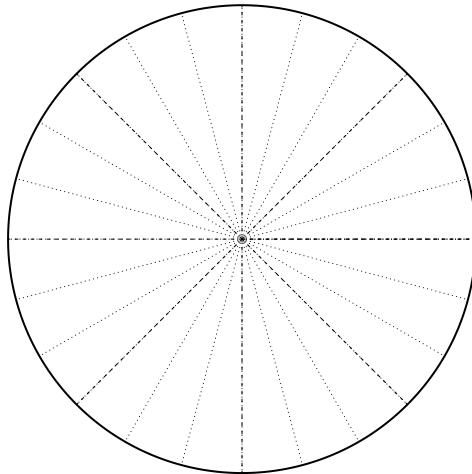
u12 Radians, Degrees, and Arc Length EXAM (version 157)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

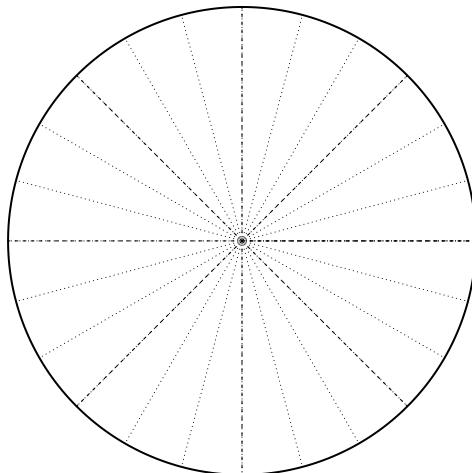


u12 Radians, Degrees, and Arc Length EXAM (version 157)

2. On the circle below, draw a sketch of a 405° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



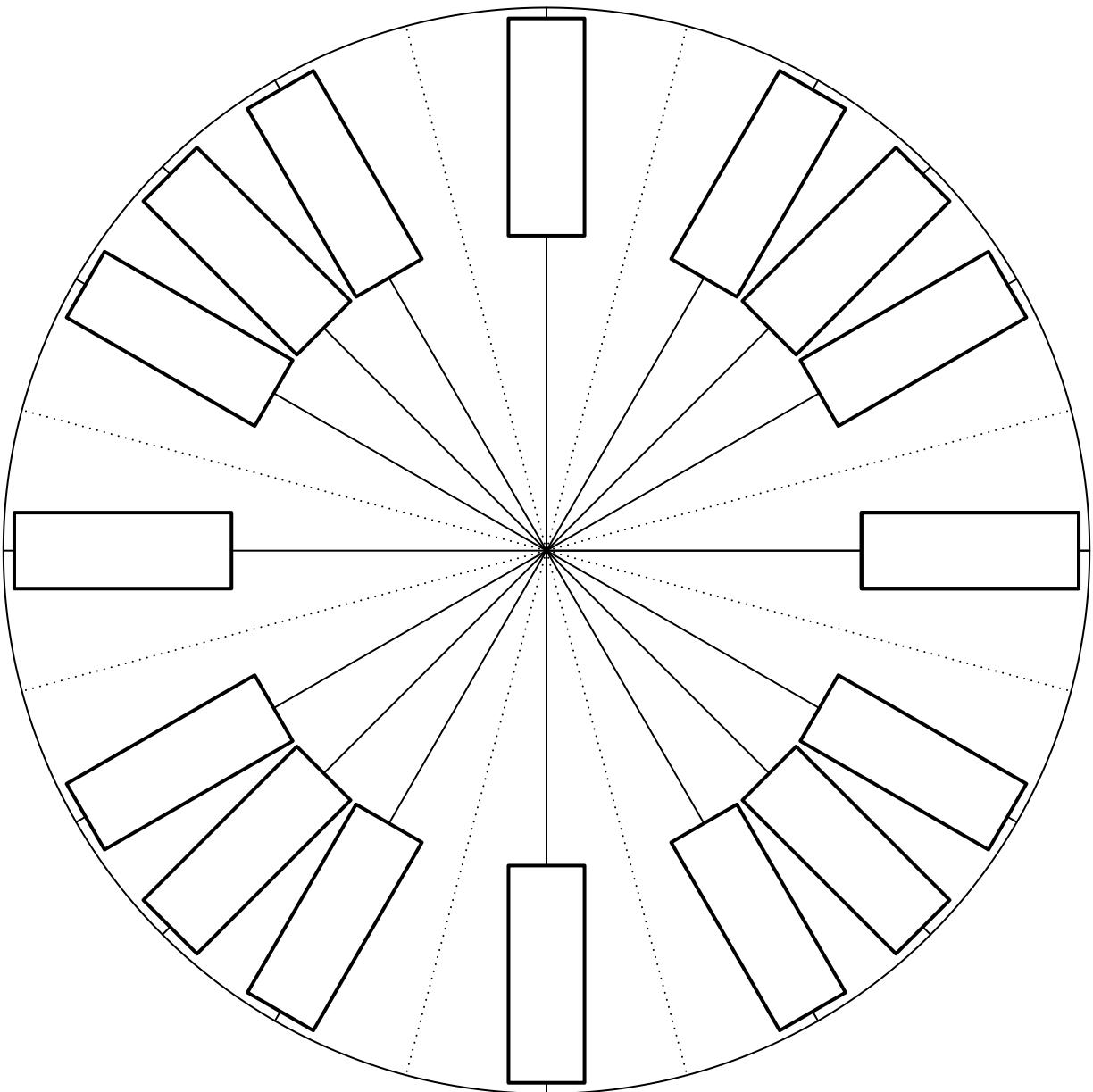
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

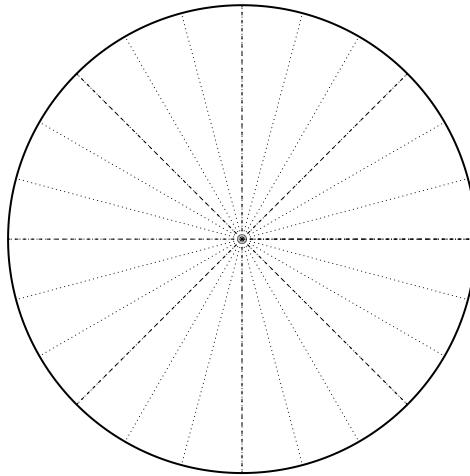
u12 Radians, Degrees, and Arc Length EXAM (version 158)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

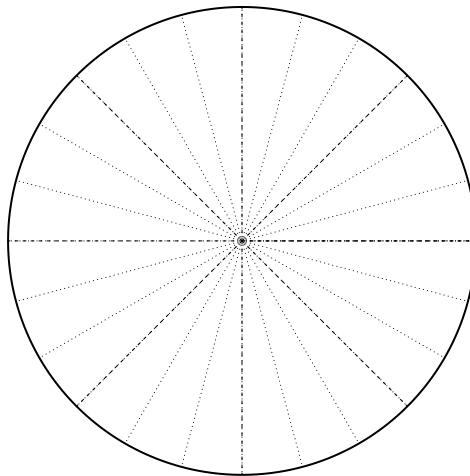


u12 Radians, Degrees, and Arc Length EXAM (version 158)

2. On the circle below, draw a sketch of a -570° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



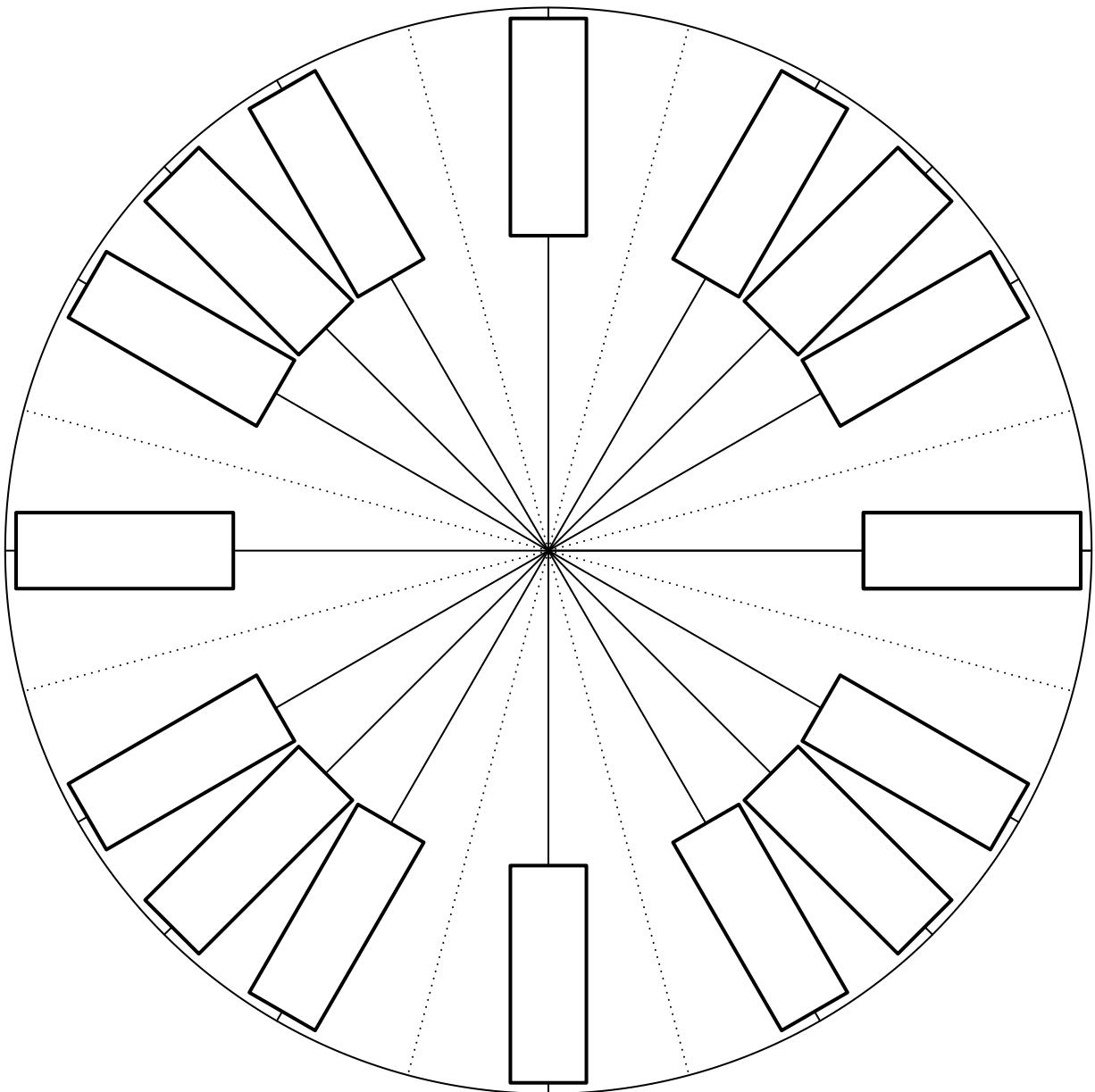
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 15 meters. Find θ .

Name: _____

Date: _____

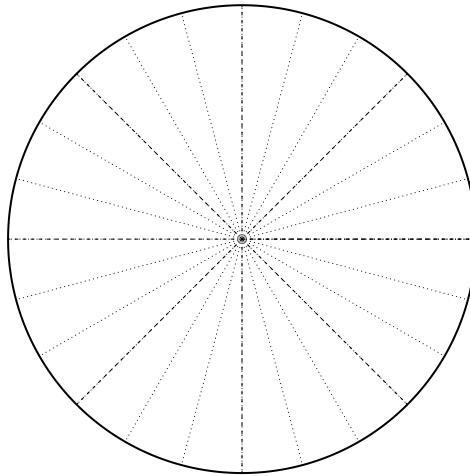
u12 Radians, Degrees, and Arc Length EXAM (version 159)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

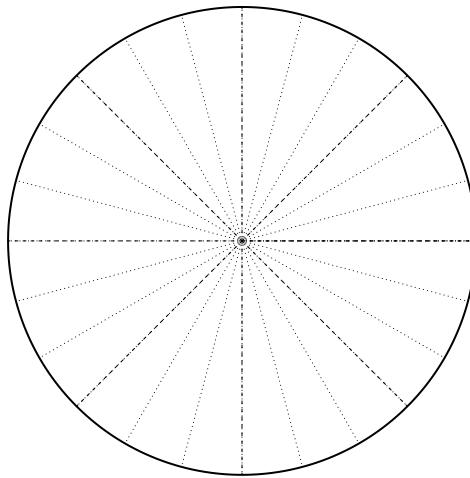


u12 Radians, Degrees, and Arc Length EXAM (version 159)

2. On the circle below, draw a sketch of a 1350° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{43\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



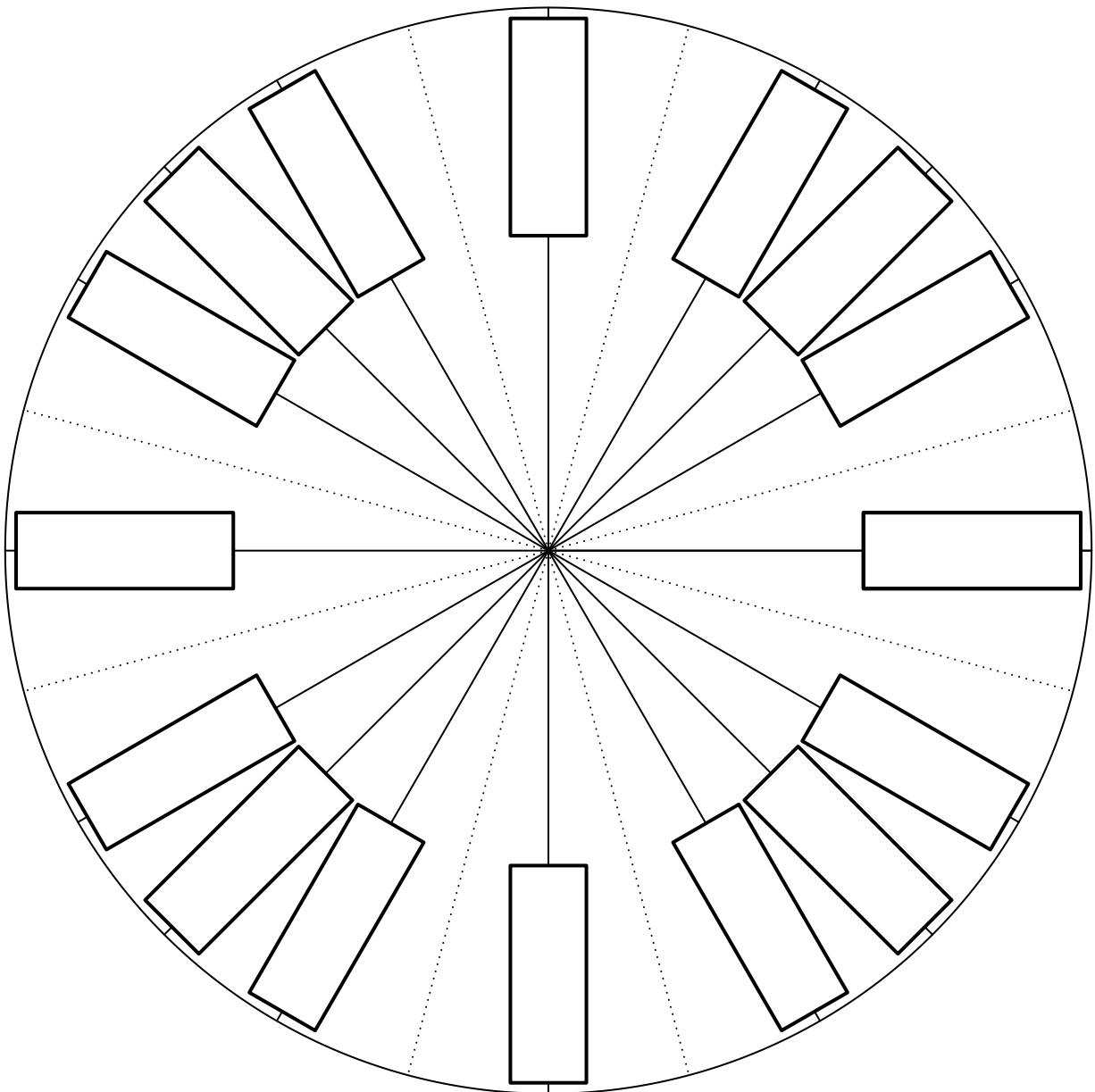
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 6 radians. The arc length equals 30 meters. Find r .

Name: _____

Date: _____

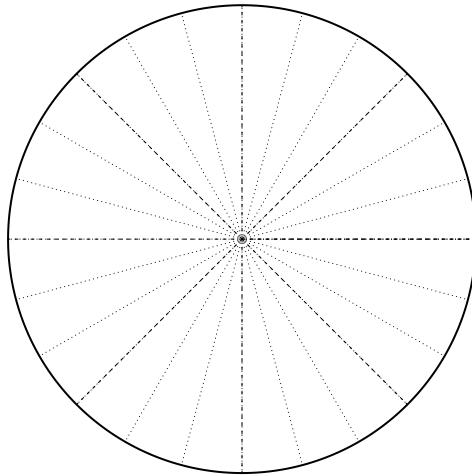
u12 Radians, Degrees, and Arc Length EXAM (version 160)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

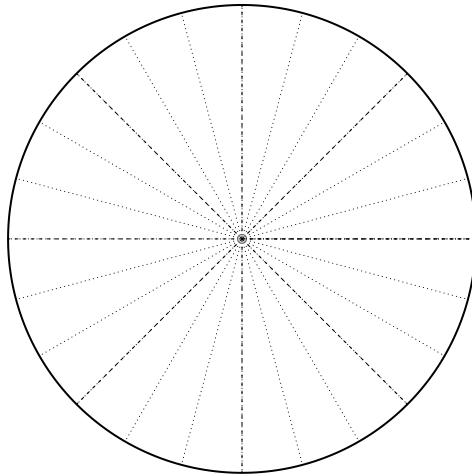


u12 Radians, Degrees, and Arc Length EXAM (version 160)

2. On the circle below, draw a sketch of a -945° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-47\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



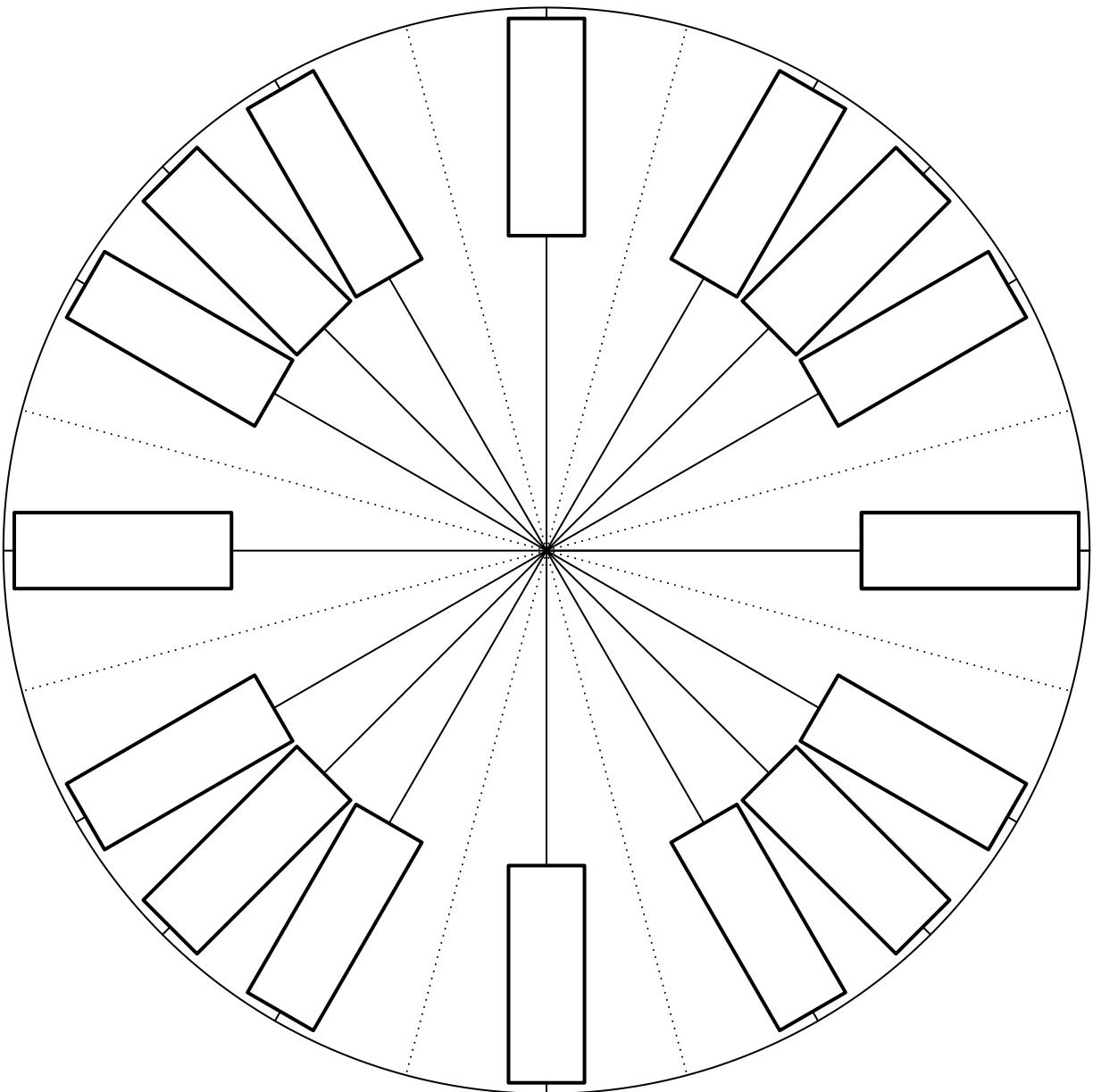
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 10 meters. Find θ .

Name: _____

Date: _____

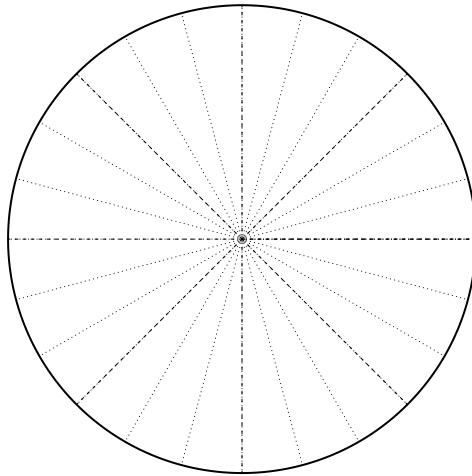
u12 Radians, Degrees, and Arc Length EXAM (version 161)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

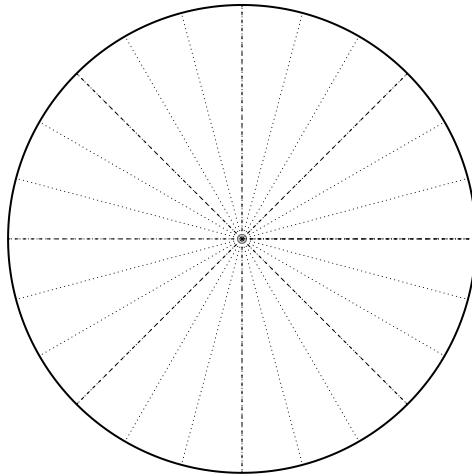


u12 Radians, Degrees, and Arc Length EXAM (version 161)

2. On the circle below, draw a sketch of a 630° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{17\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



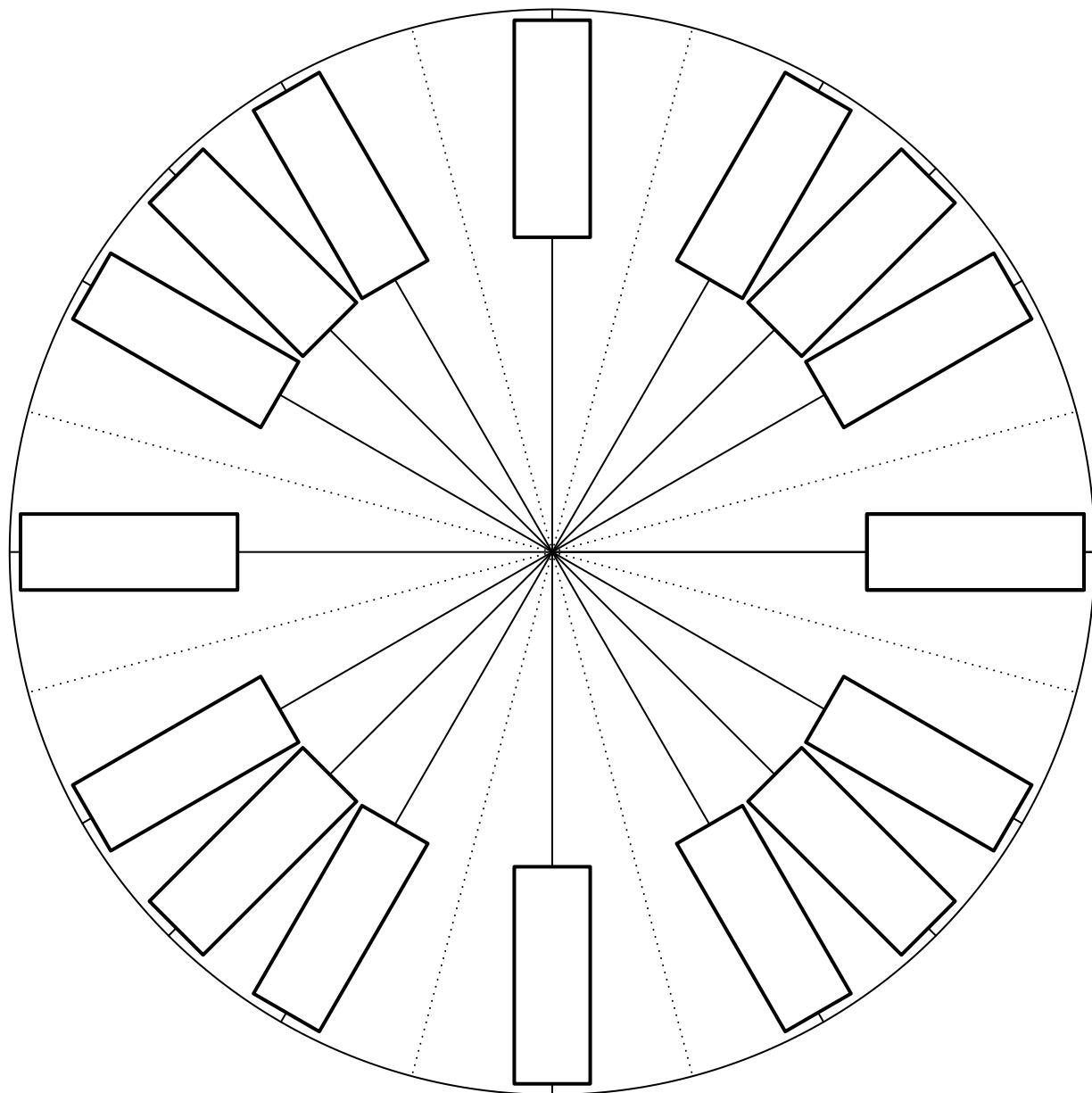
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

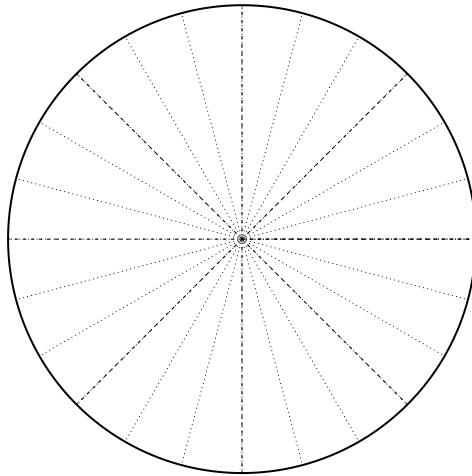
u12 Radians, Degrees, and Arc Length EXAM (version 162)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

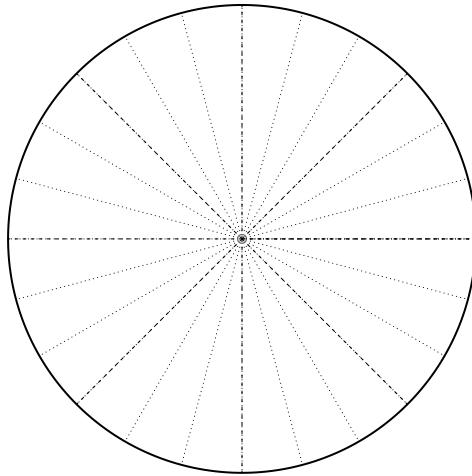


u12 Radians, Degrees, and Arc Length EXAM (version 162)

2. On the circle below, draw a sketch of a -420° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{19\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



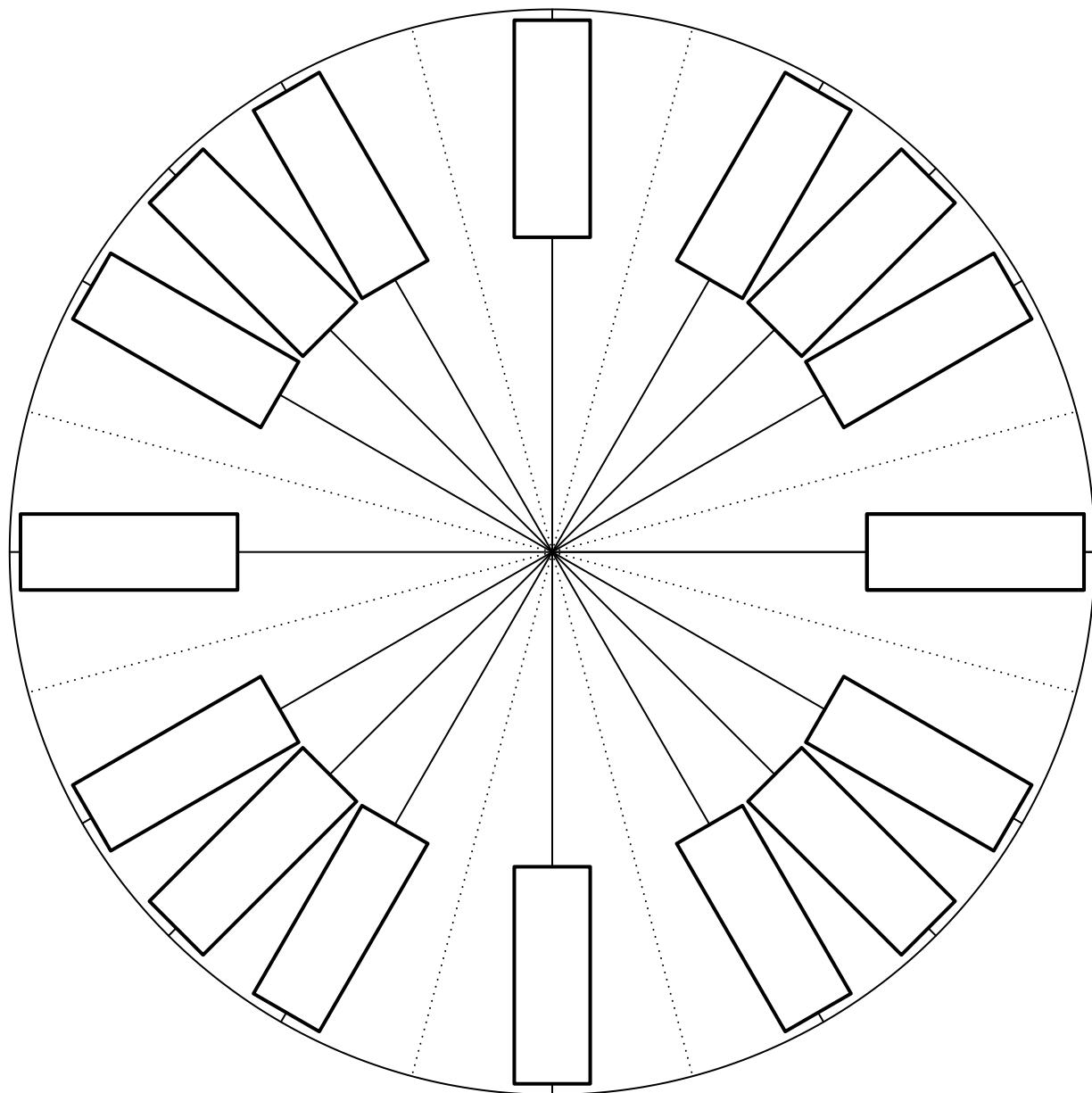
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

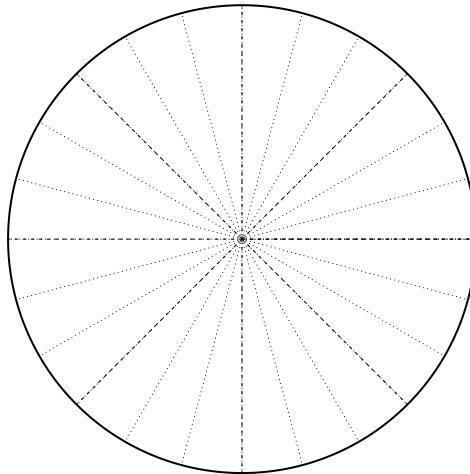
u12 Radians, Degrees, and Arc Length EXAM (version 163)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

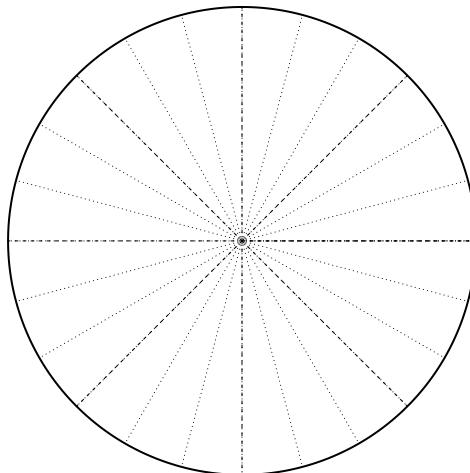


u12 Radians, Degrees, and Arc Length EXAM (version 163)

2. On the circle below, draw a sketch of a -1170° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-11\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



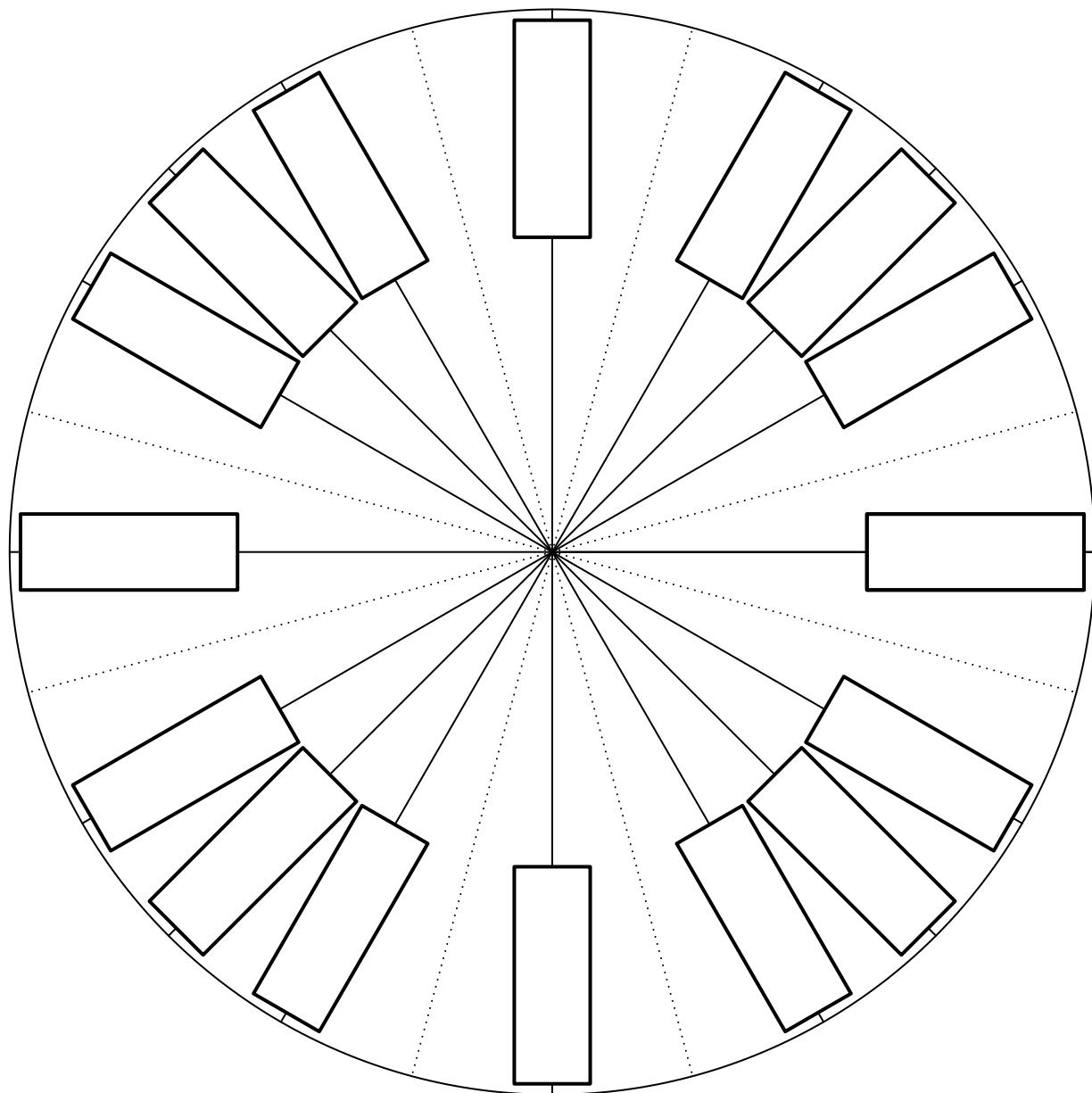
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 20 meters. Find r .

Name: _____

Date: _____

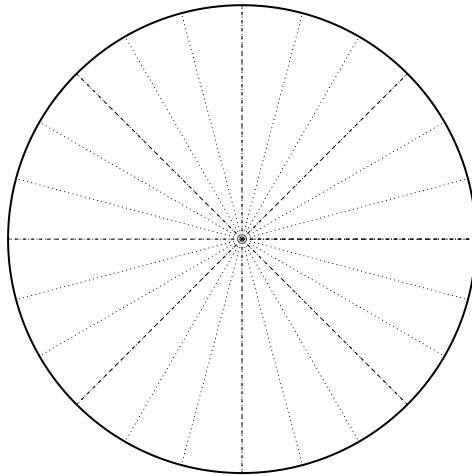
u12 Radians, Degrees, and Arc Length EXAM (version 164)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

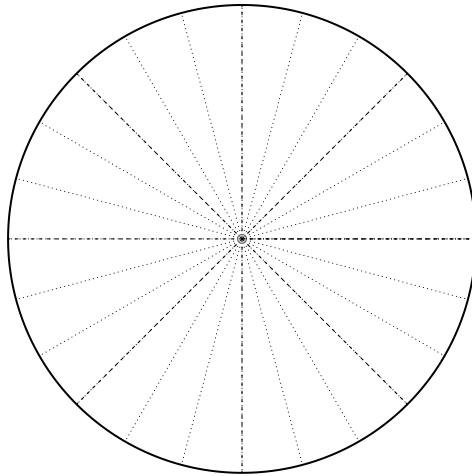


u12 Radians, Degrees, and Arc Length EXAM (version 164)

2. On the circle below, draw a sketch of a -855° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-31\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



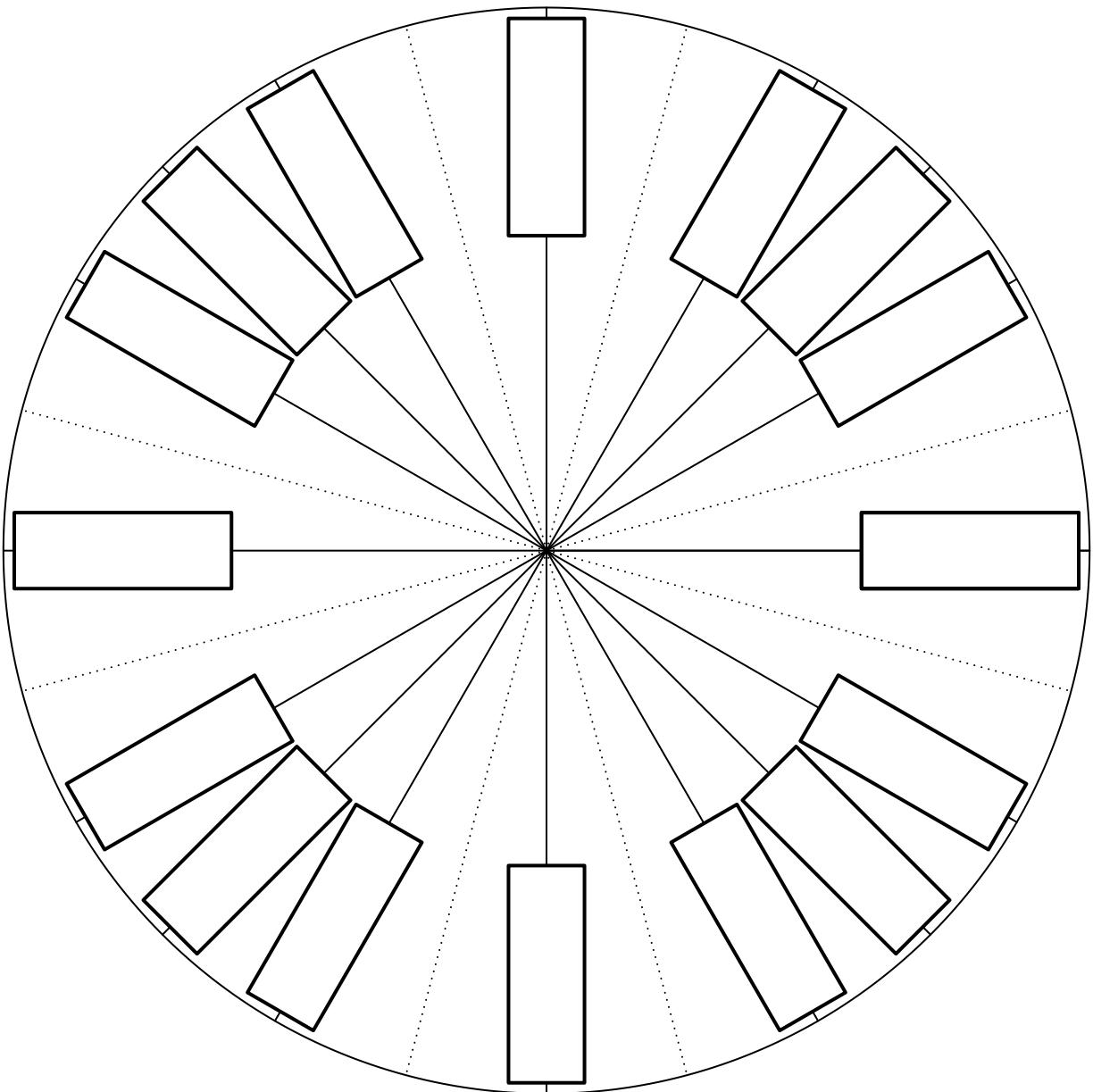
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

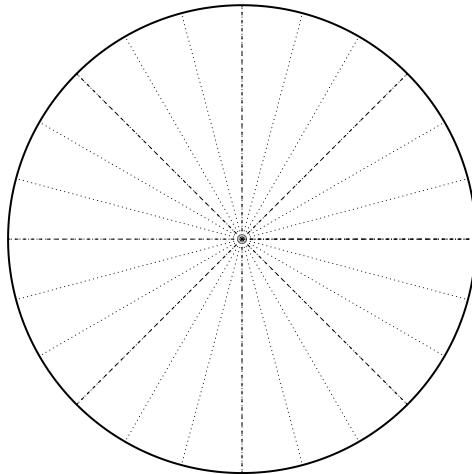
u12 Radians, Degrees, and Arc Length EXAM (version 165)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

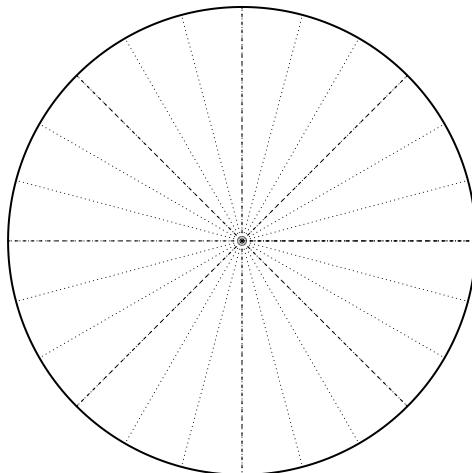


u12 Radians, Degrees, and Arc Length EXAM (version 165)

2. On the circle below, draw a sketch of a -585° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



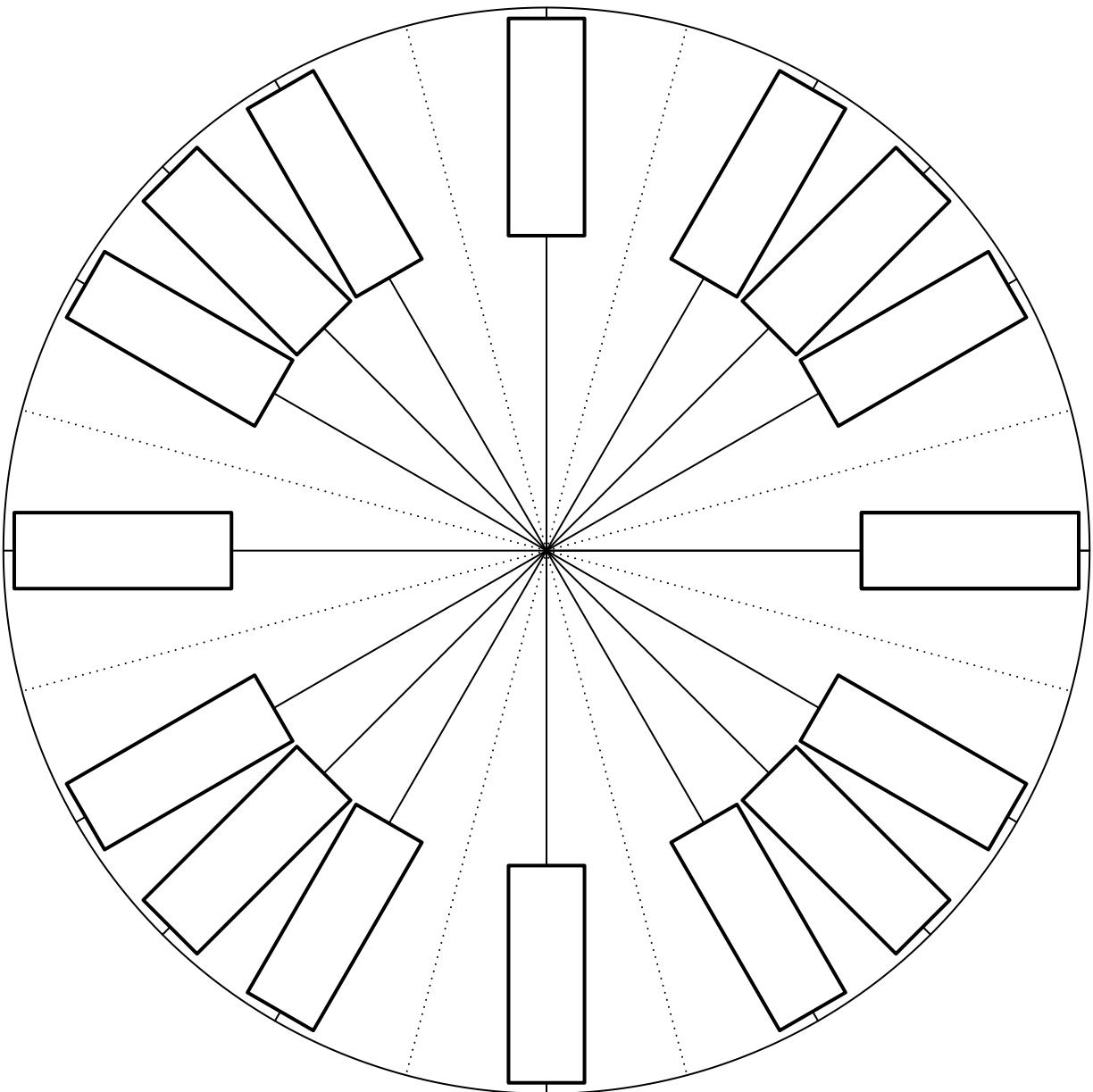
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

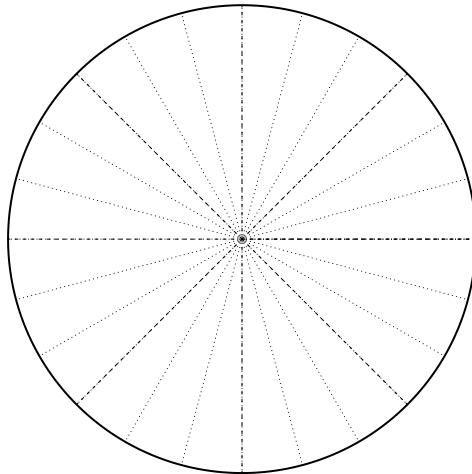
u12 Radians, Degrees, and Arc Length EXAM (version 166)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

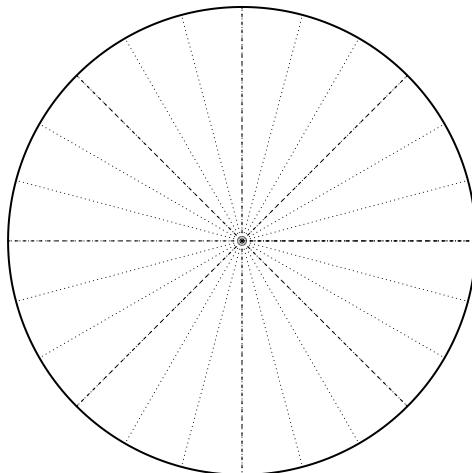


u12 Radians, Degrees, and Arc Length EXAM (version 166)

2. On the circle below, draw a sketch of a -1110° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{21\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



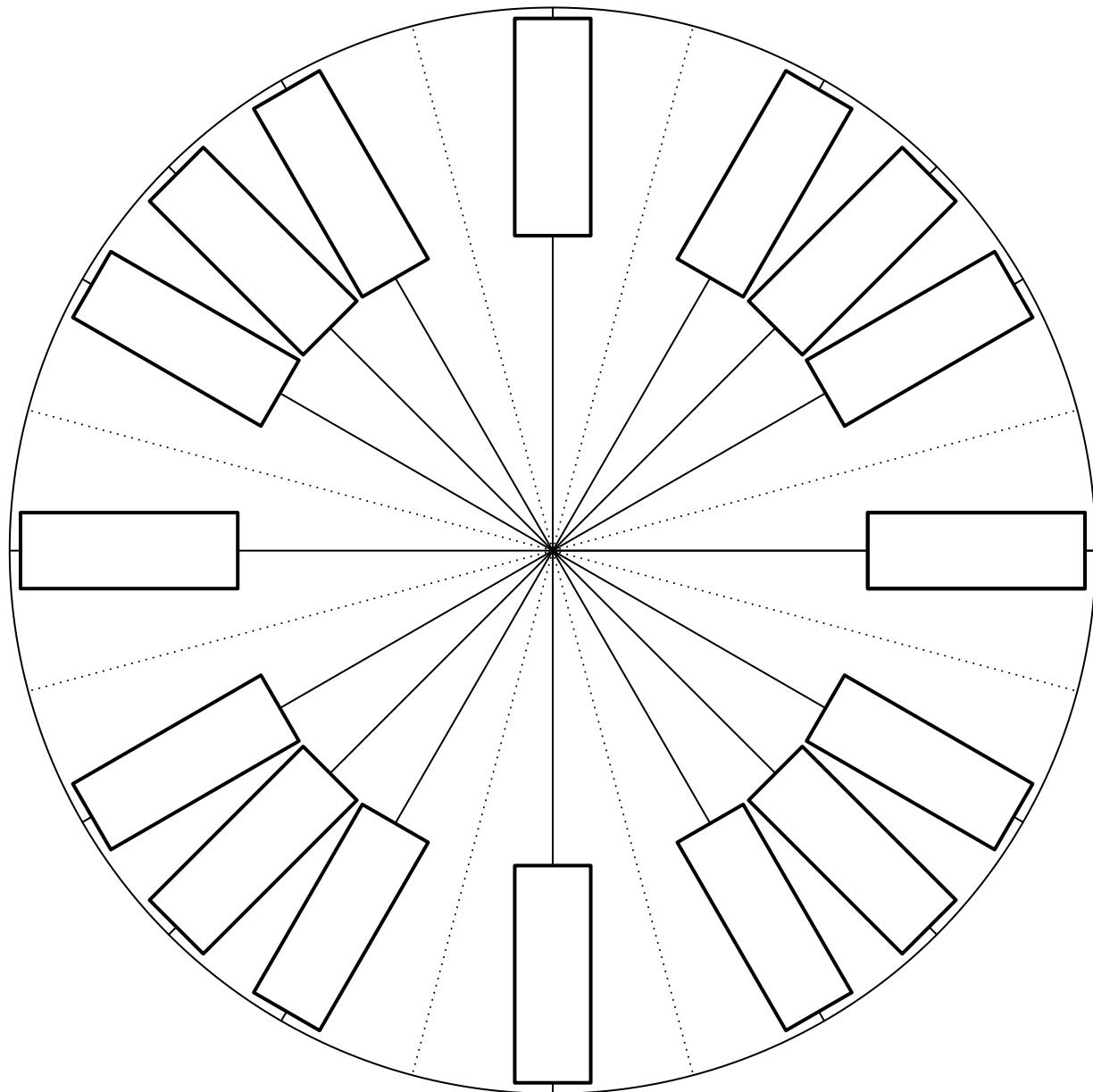
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

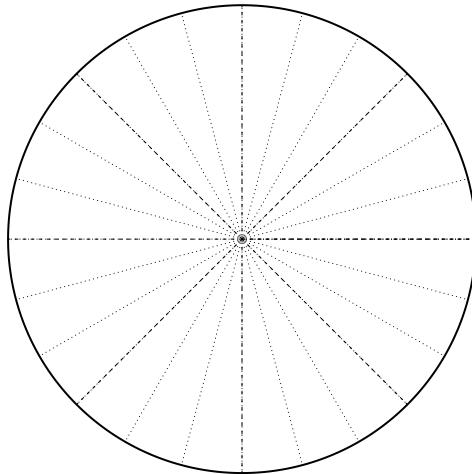
u12 Radians, Degrees, and Arc Length EXAM (version 167)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

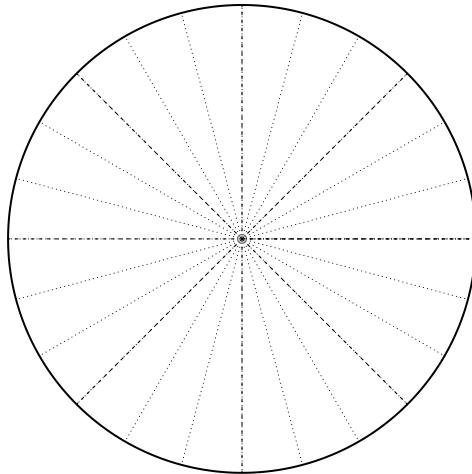


u12 Radians, Degrees, and Arc Length EXAM (version 167)

2. On the circle below, draw a sketch of a -600° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-7\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



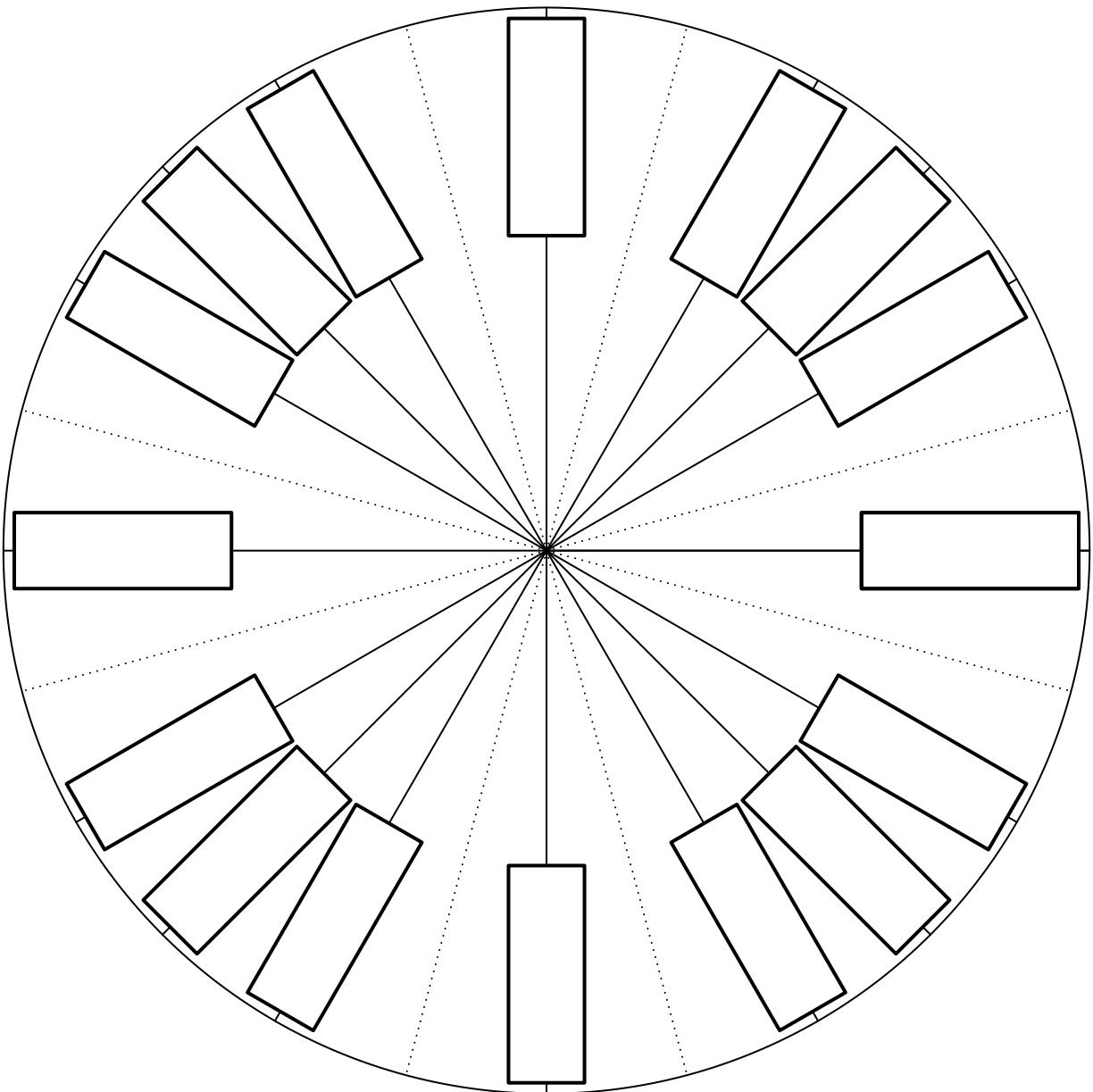
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

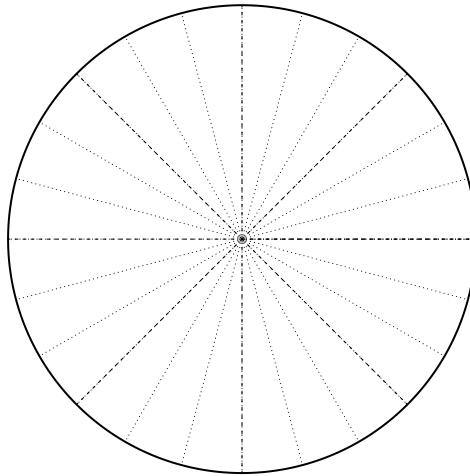
u12 Radians, Degrees, and Arc Length EXAM (version 168)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

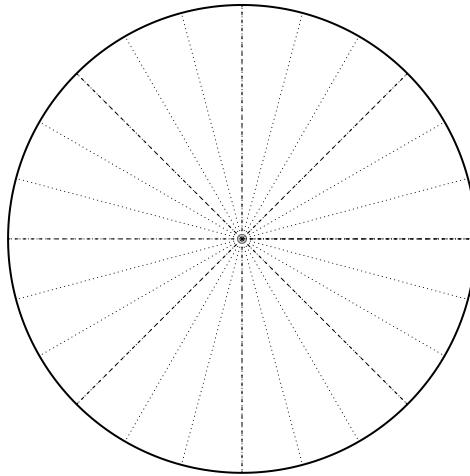


u12 Radians, Degrees, and Arc Length EXAM (version 168)

2. On the circle below, draw a sketch of a 1125° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-19\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



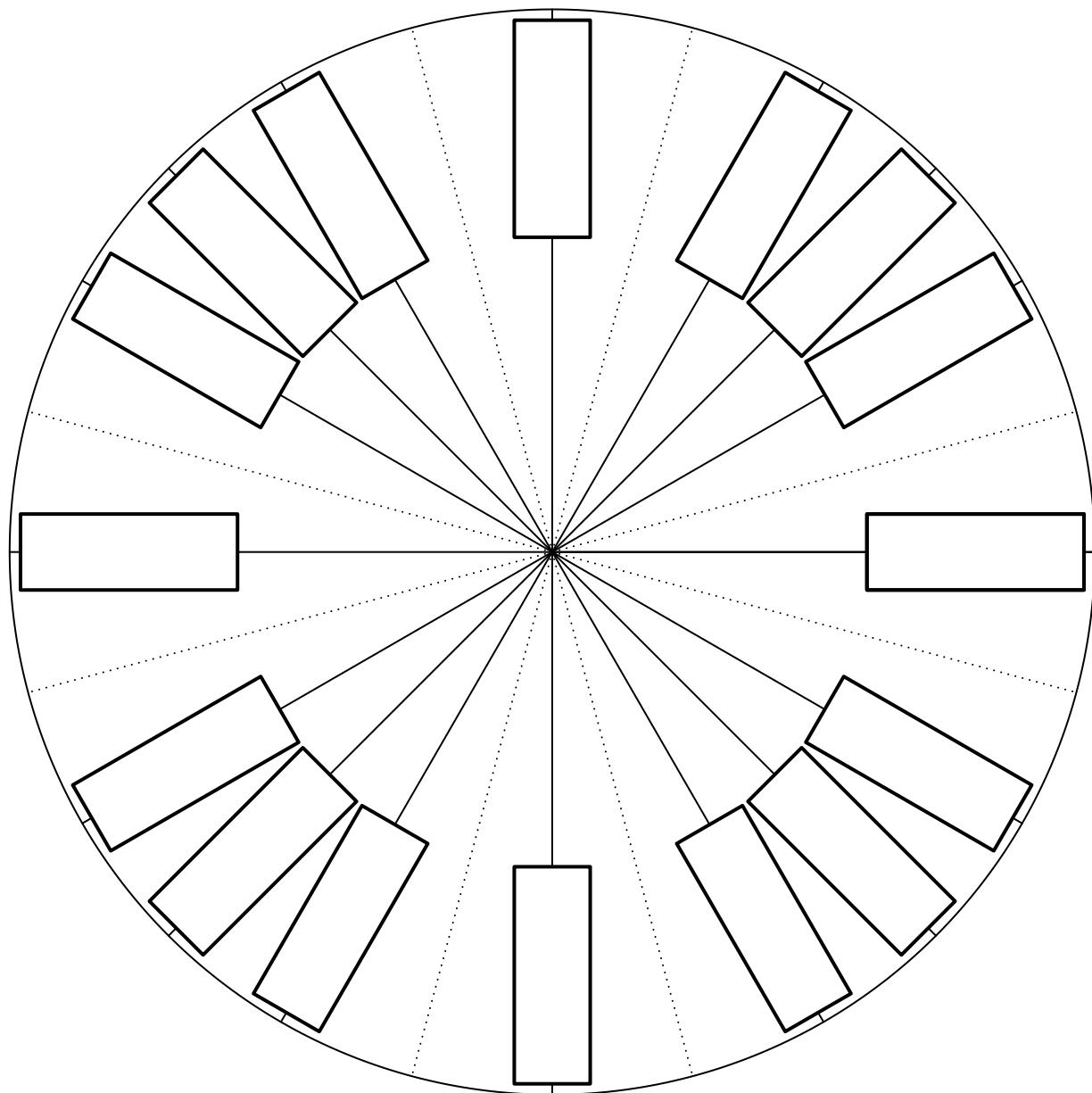
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

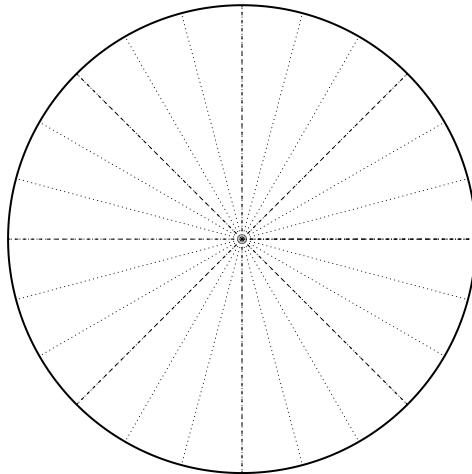
u12 Radians, Degrees, and Arc Length EXAM (version 169)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

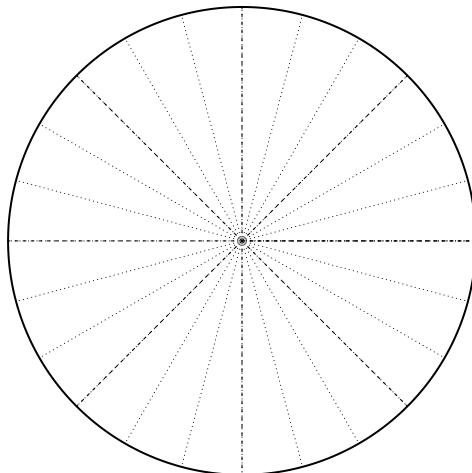


u12 Radians, Degrees, and Arc Length EXAM (version 169)

2. On the circle below, draw a sketch of a 810° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-19\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



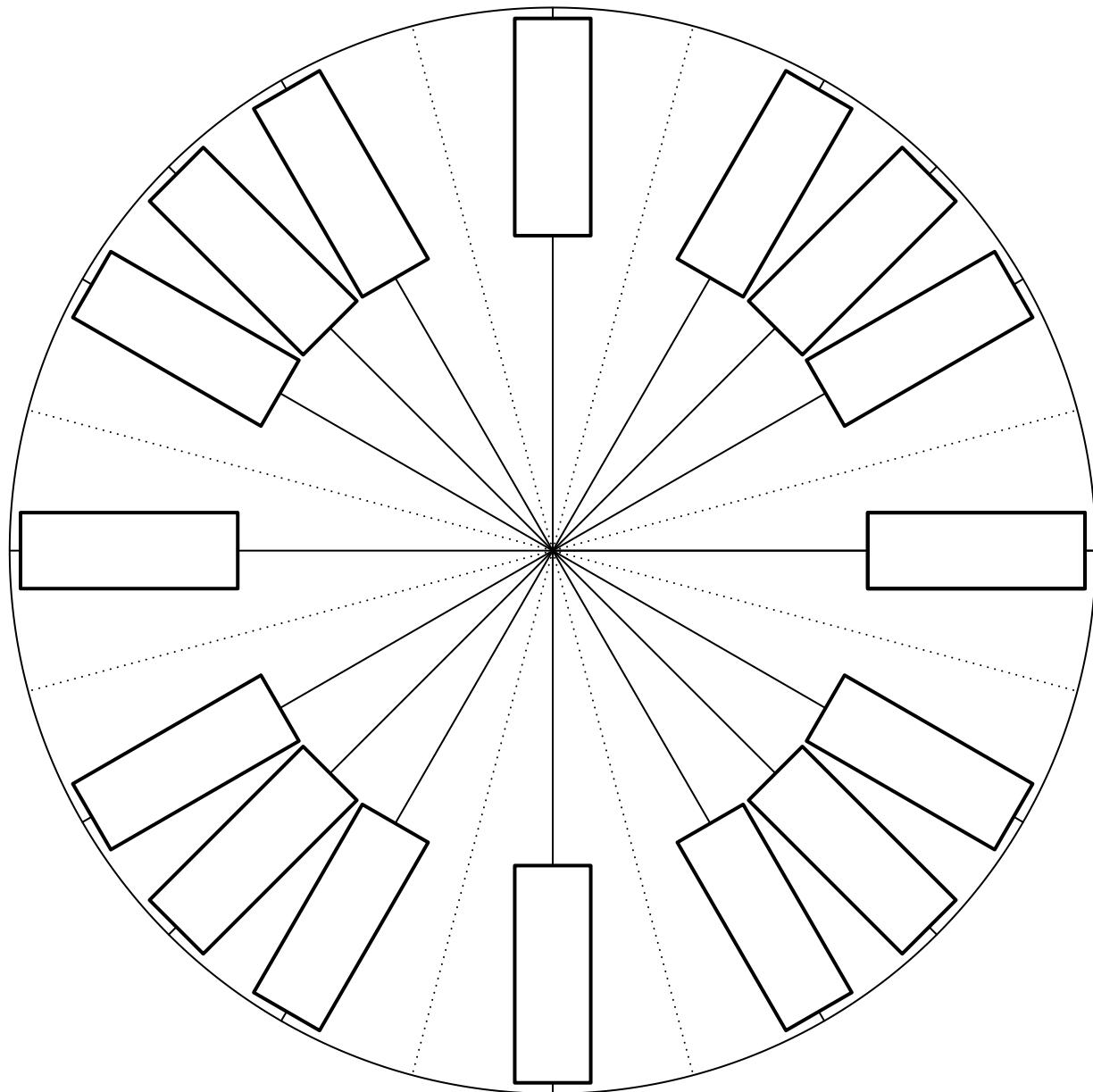
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals θ radians. The arc length equals 24 meters. Find θ .

Name: _____

Date: _____

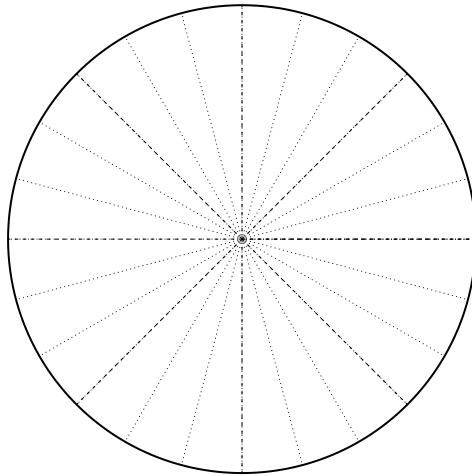
u12 Radians, Degrees, and Arc Length EXAM (version 170)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

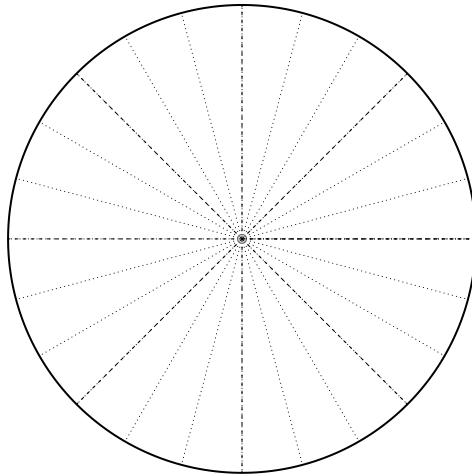


u12 Radians, Degrees, and Arc Length EXAM (version 170)

2. On the circle below, draw a sketch of a 1320° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-10\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



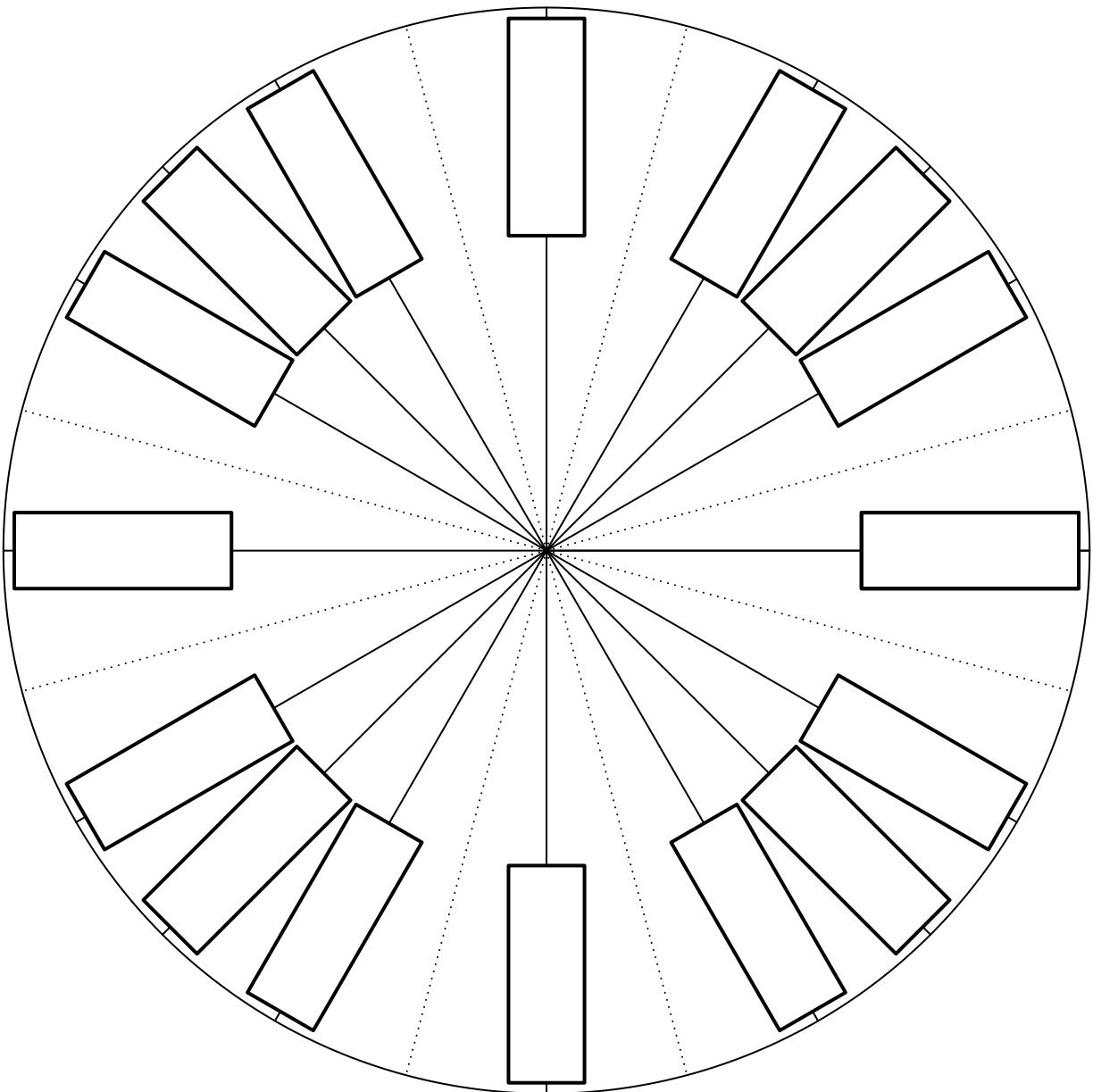
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 3 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

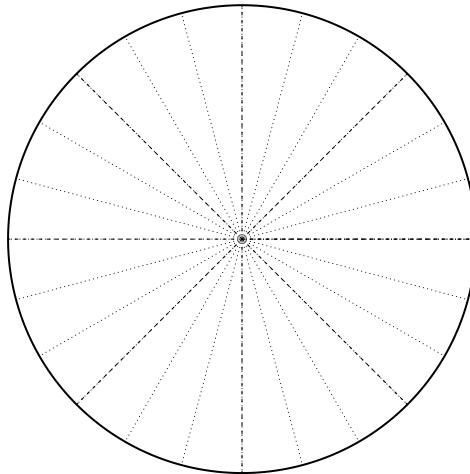
u12 Radians, Degrees, and Arc Length EXAM (version 171)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

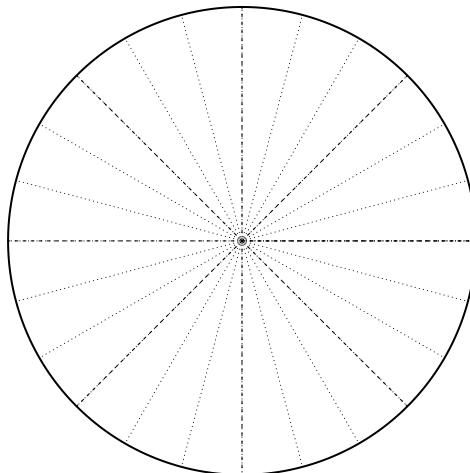


u12 Radians, Degrees, and Arc Length EXAM (version 171)

2. On the circle below, draw a sketch of a 945° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-16\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



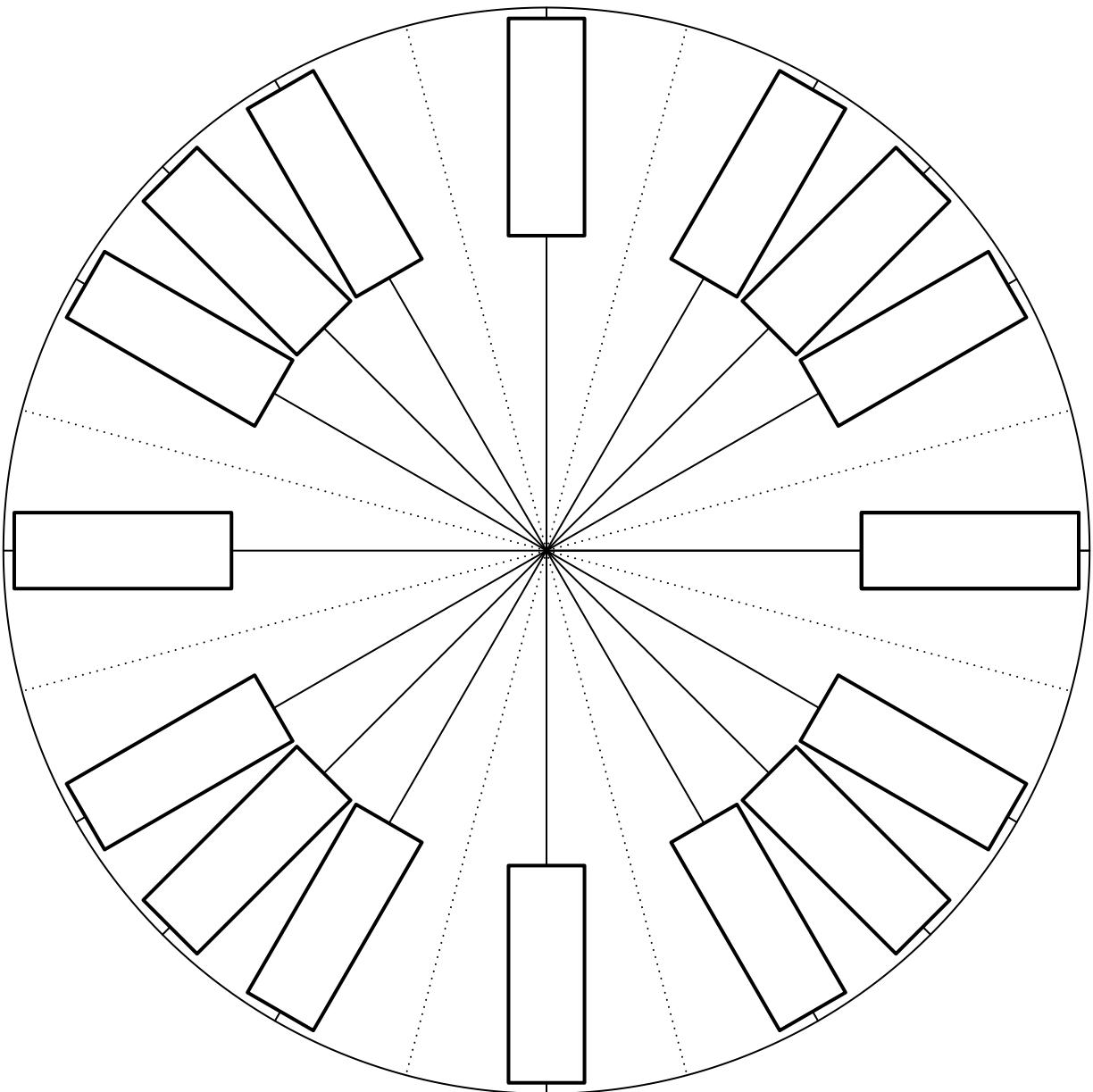
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 15 meters. Find r .

Name: _____

Date: _____

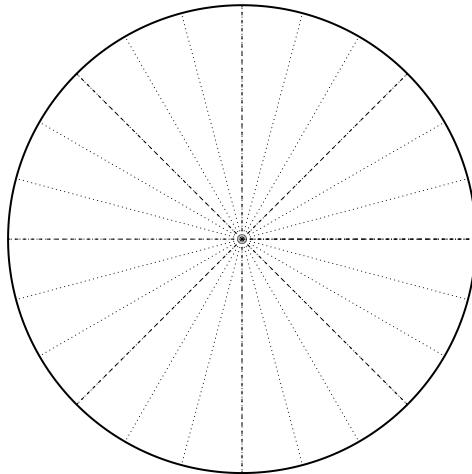
u12 Radians, Degrees, and Arc Length EXAM (version 172)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

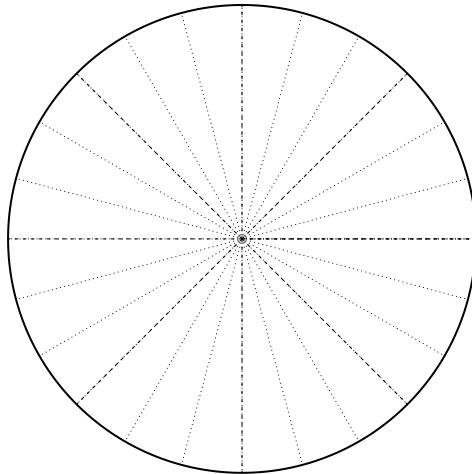


u12 Radians, Degrees, and Arc Length EXAM (version 172)

2. On the circle below, draw a sketch of a -660° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-5\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



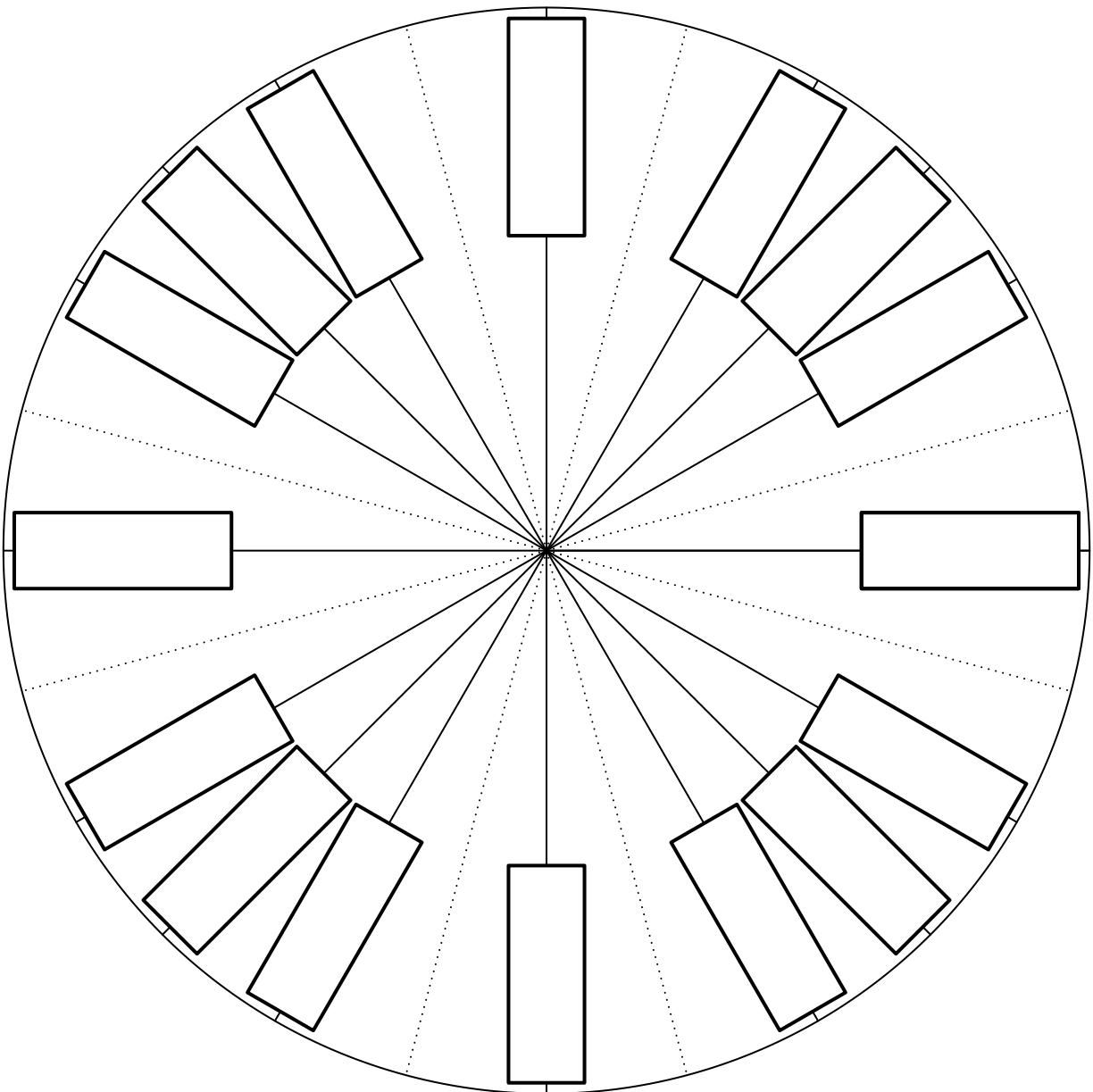
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 4 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

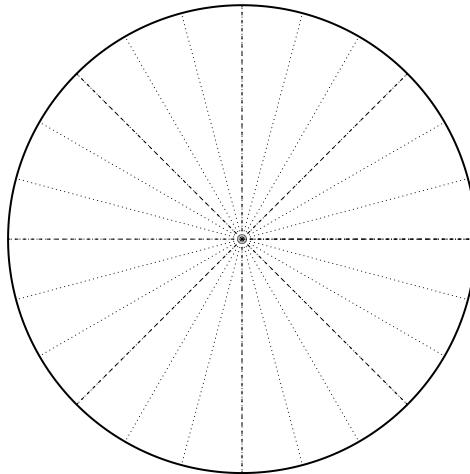
u12 Radians, Degrees, and Arc Length EXAM (version 173)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

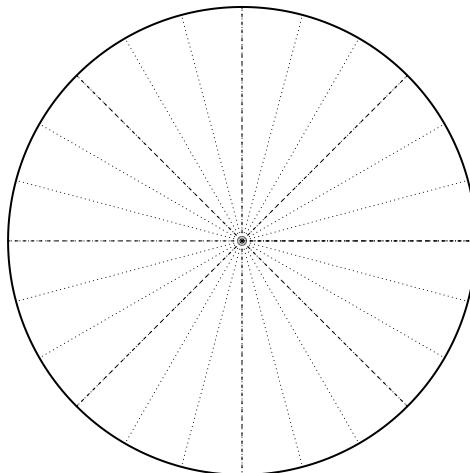


u12 Radians, Degrees, and Arc Length EXAM (version 173)

2. On the circle below, draw a sketch of a -1125° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-31\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



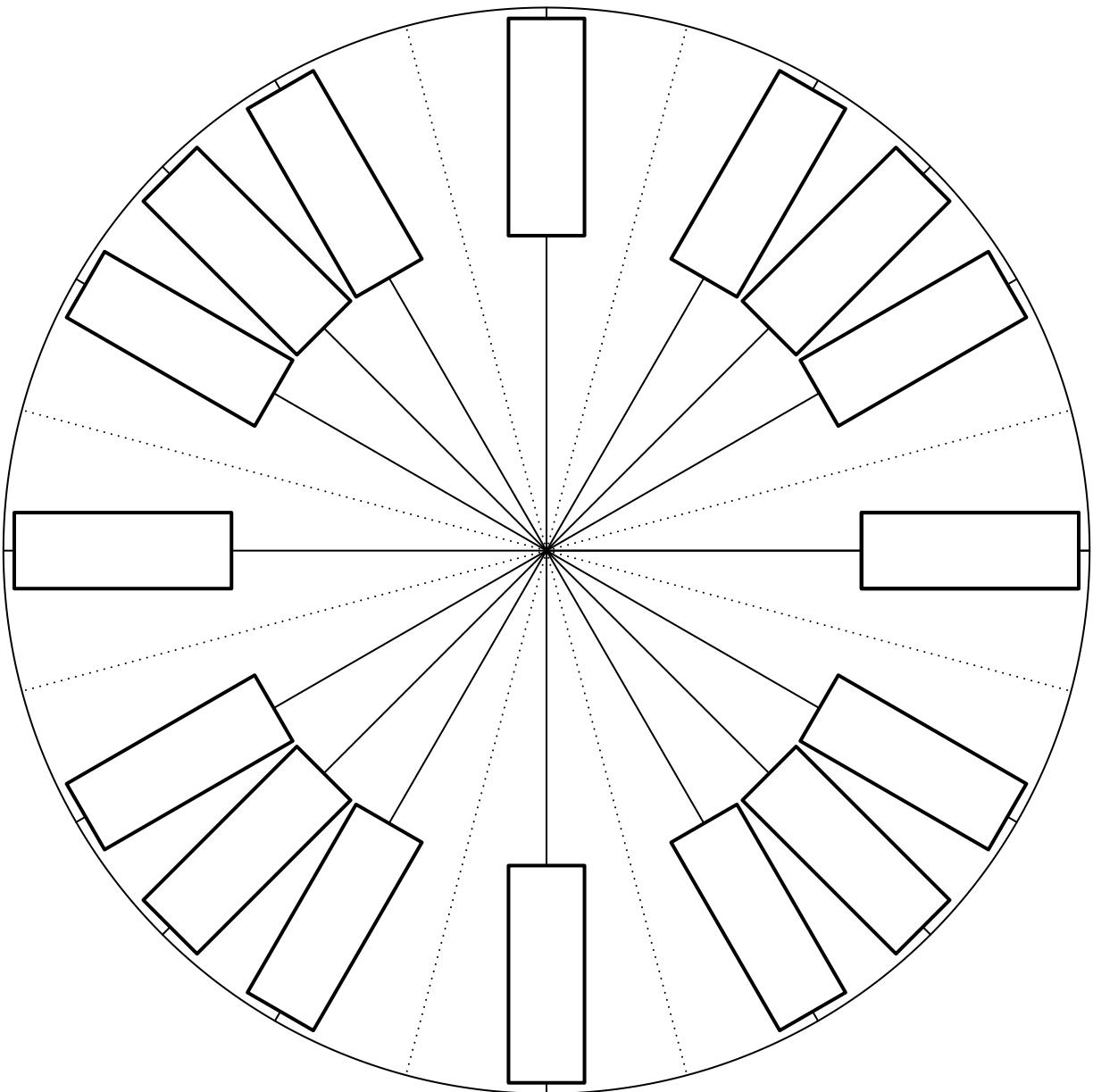
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 30 meters. Find r .

Name: _____

Date: _____

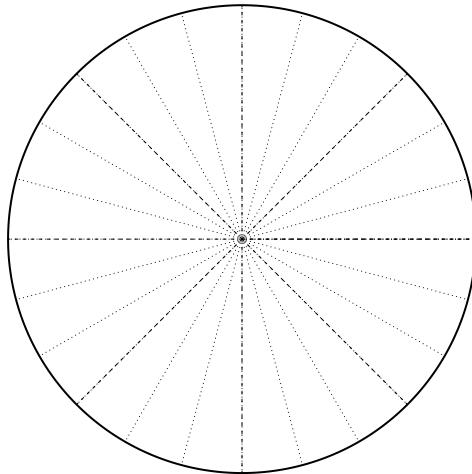
u12 Radians, Degrees, and Arc Length EXAM (version 174)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

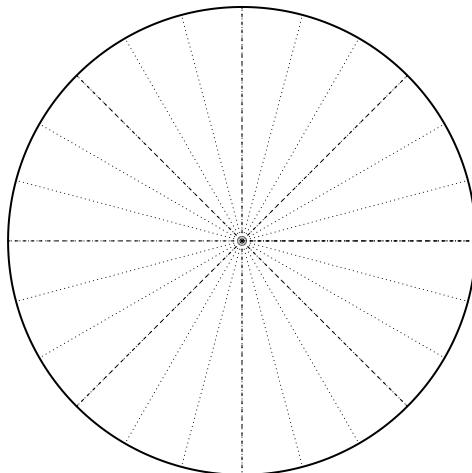


u12 Radians, Degrees, and Arc Length EXAM (version 174)

2. On the circle below, draw a sketch of a -495° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{43\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



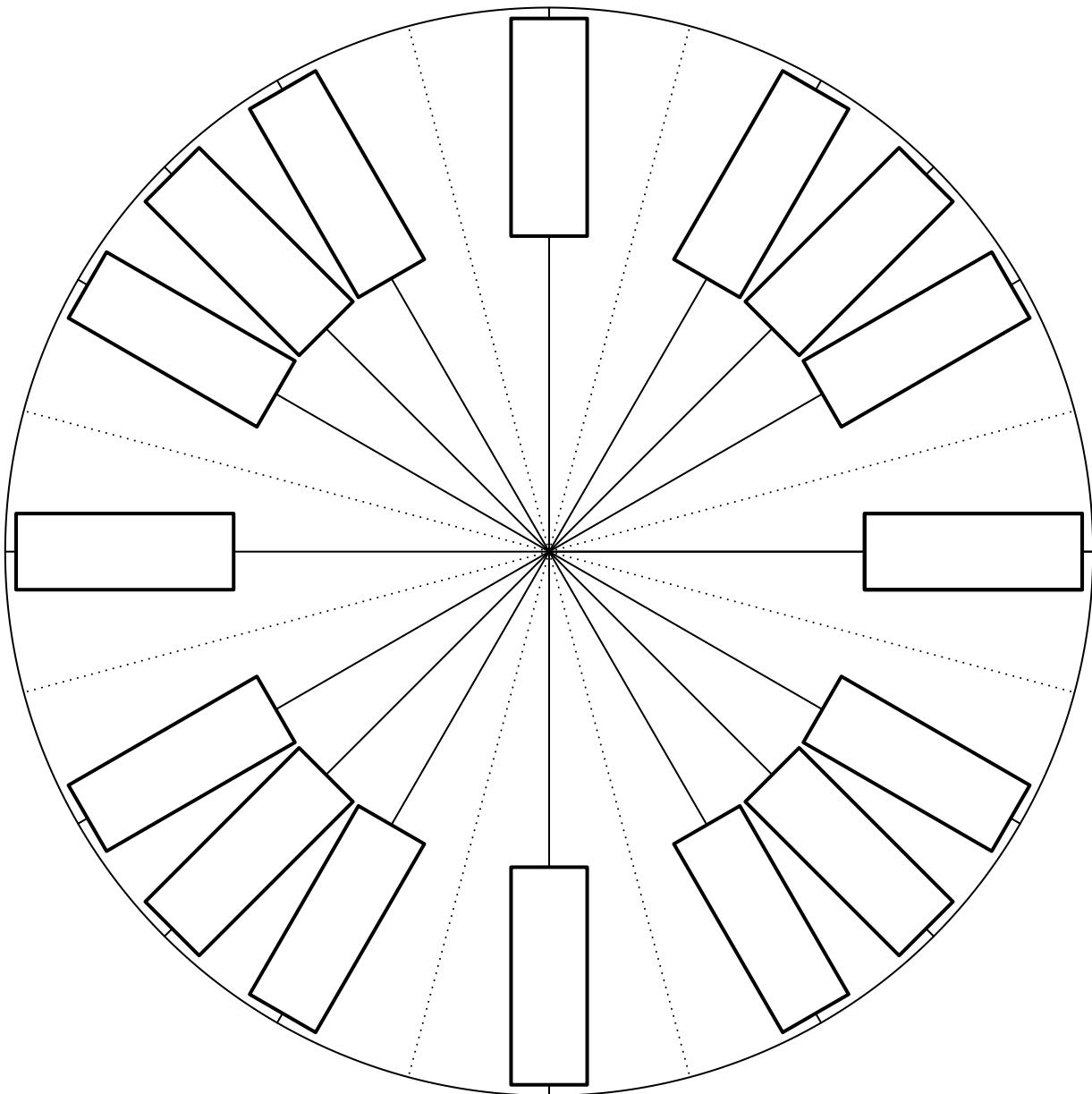
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 12 meters. Find θ .

Name: _____

Date: _____

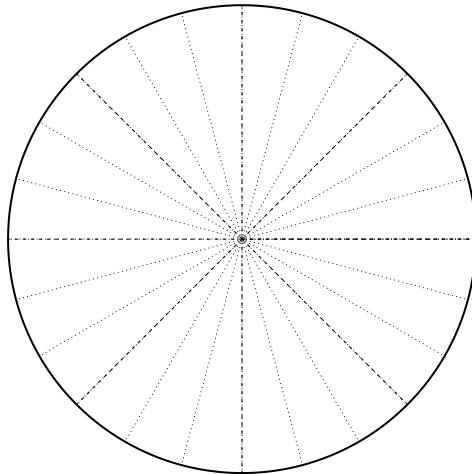
u12 Radians, Degrees, and Arc Length EXAM (version 175)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

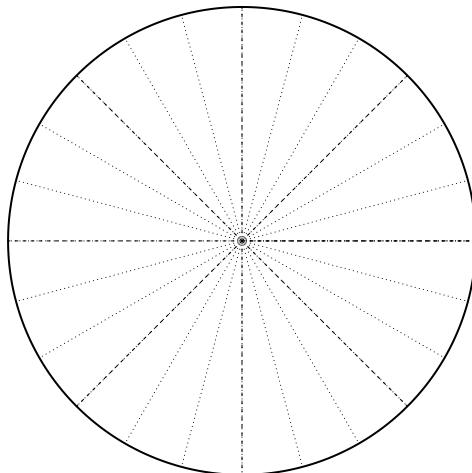


u12 Radians, Degrees, and Arc Length EXAM (version 175)

2. On the circle below, draw a sketch of a -1020° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{15\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



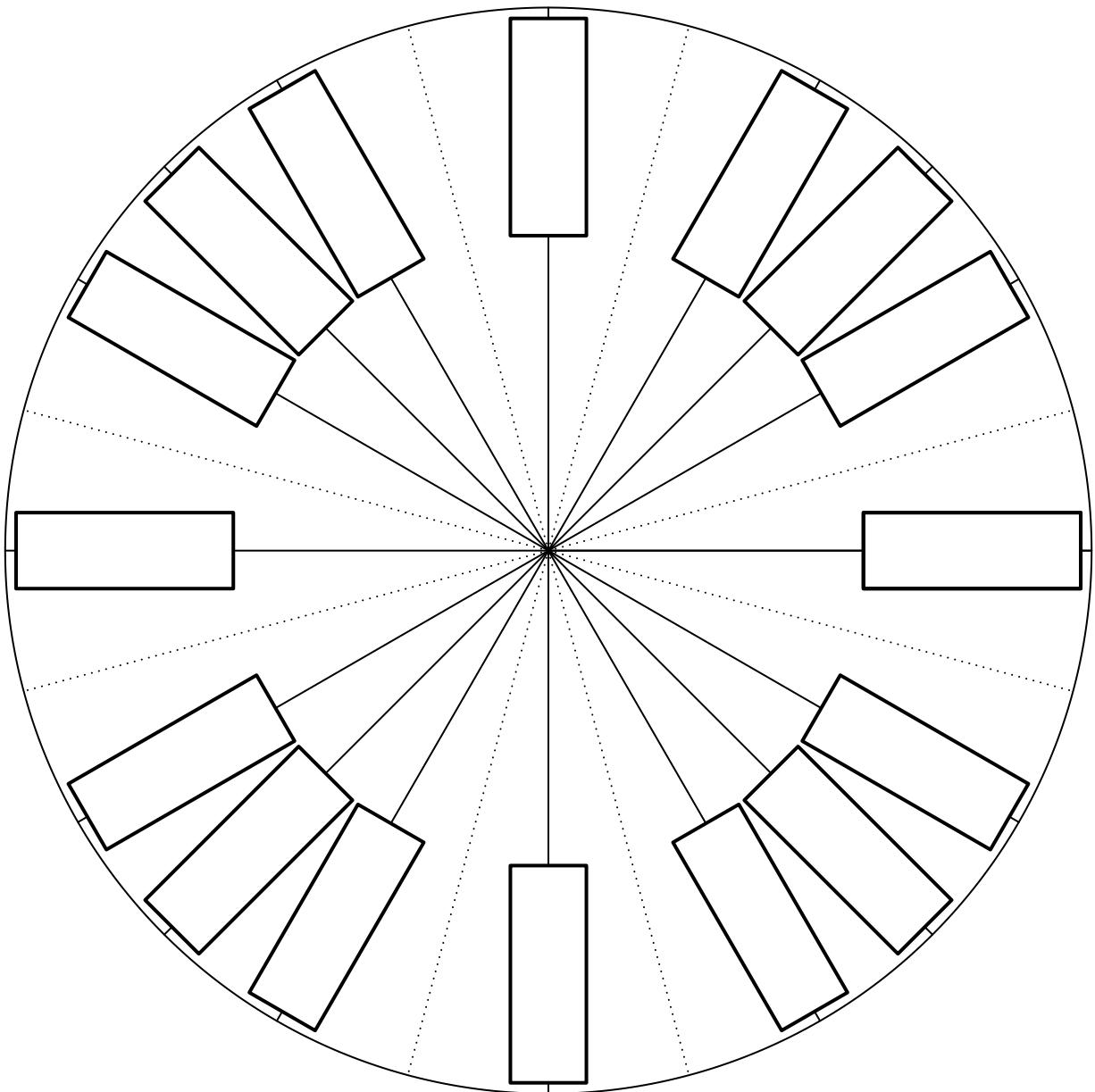
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 10 meters. Find θ .

Name: _____

Date: _____

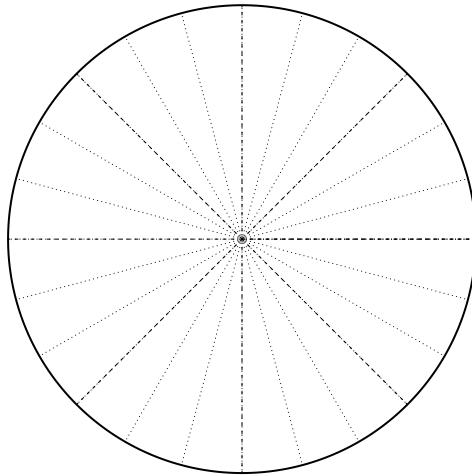
u12 Radians, Degrees, and Arc Length EXAM (version 176)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

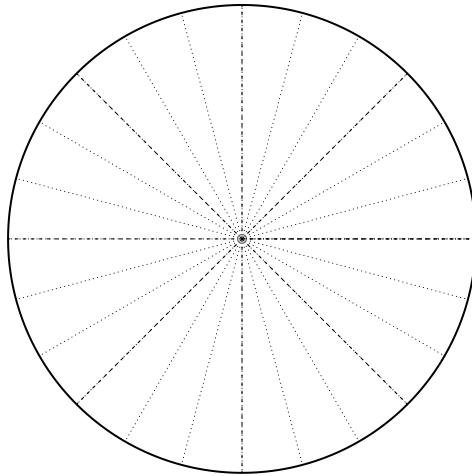


u12 Radians, Degrees, and Arc Length EXAM (version 176)

2. On the circle below, draw a sketch of a -840° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



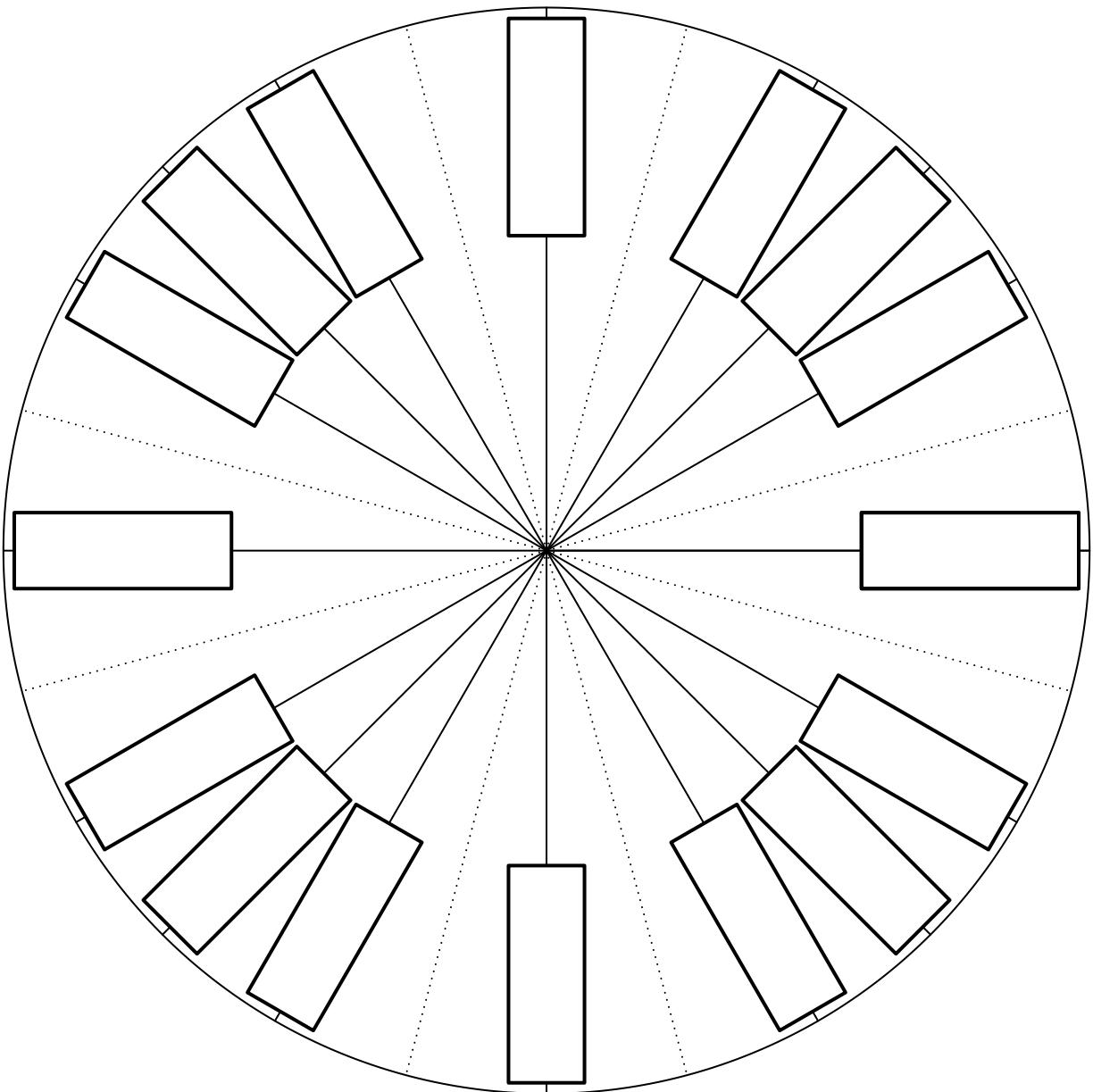
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

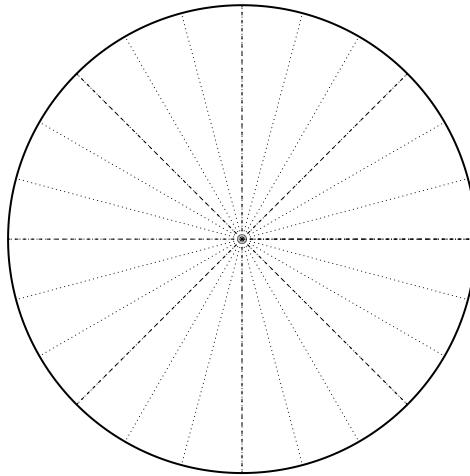
u12 Radians, Degrees, and Arc Length EXAM (version 177)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

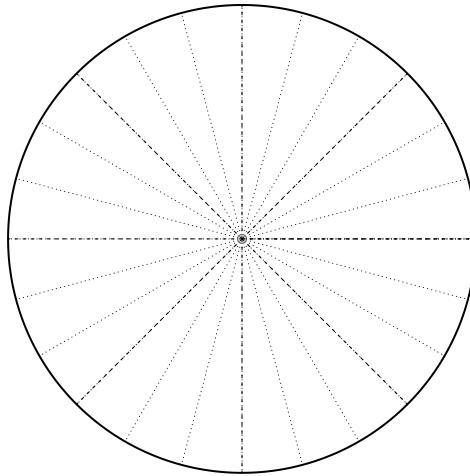


u12 Radians, Degrees, and Arc Length EXAM (version 177)

2. On the circle below, draw a sketch of a -570° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-16\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



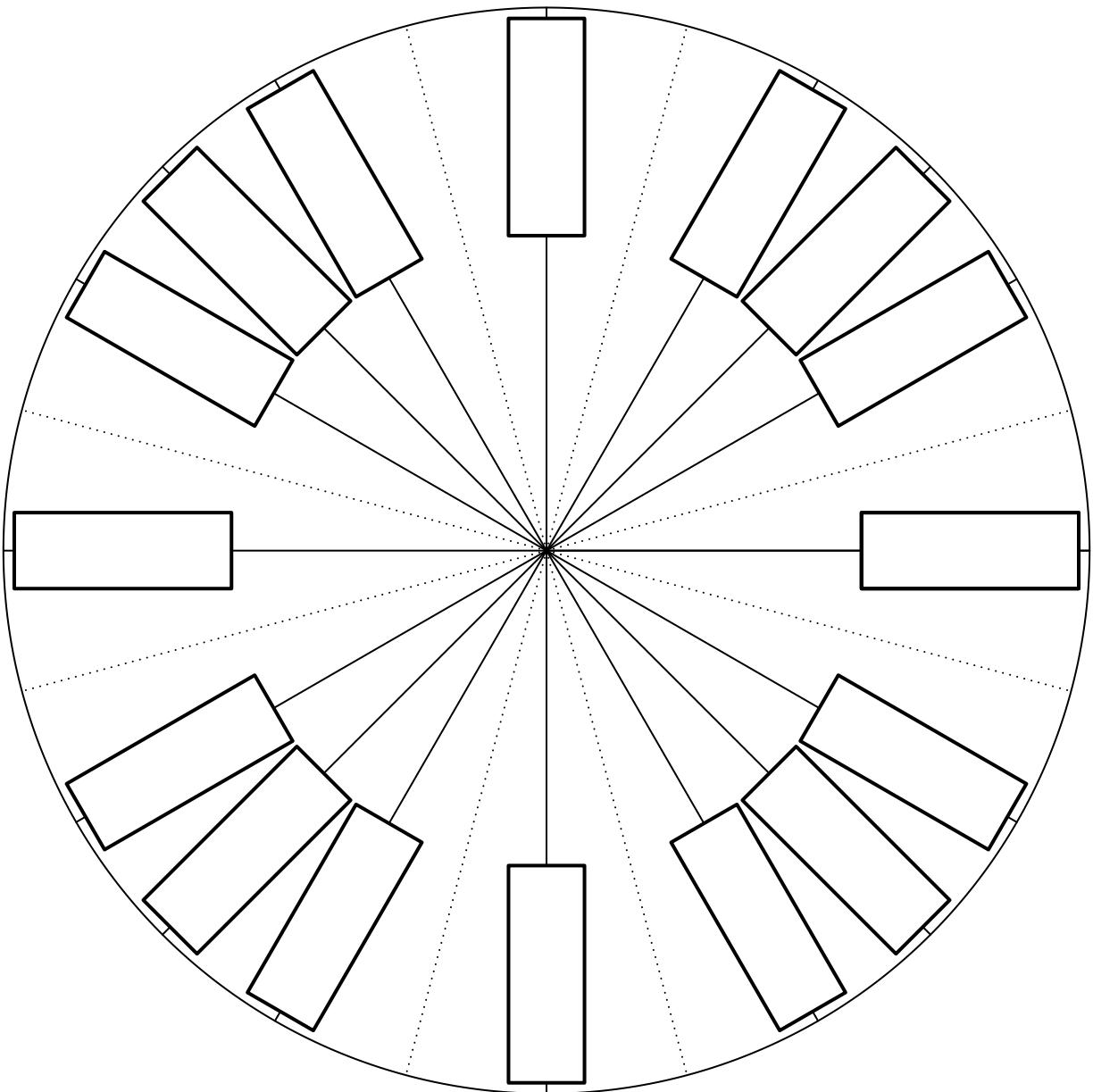
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals θ radians. The arc length equals 12 meters. Find θ .

Name: _____

Date: _____

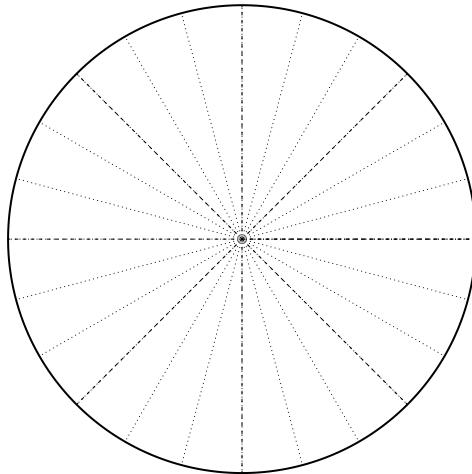
u12 Radians, Degrees, and Arc Length EXAM (version 178)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

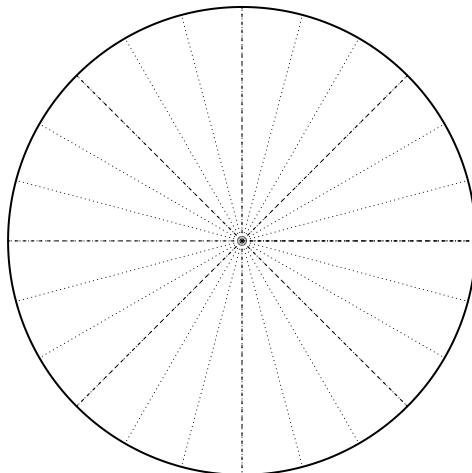


u12 Radians, Degrees, and Arc Length EXAM (version 178)

2. On the circle below, draw a sketch of a -1050° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



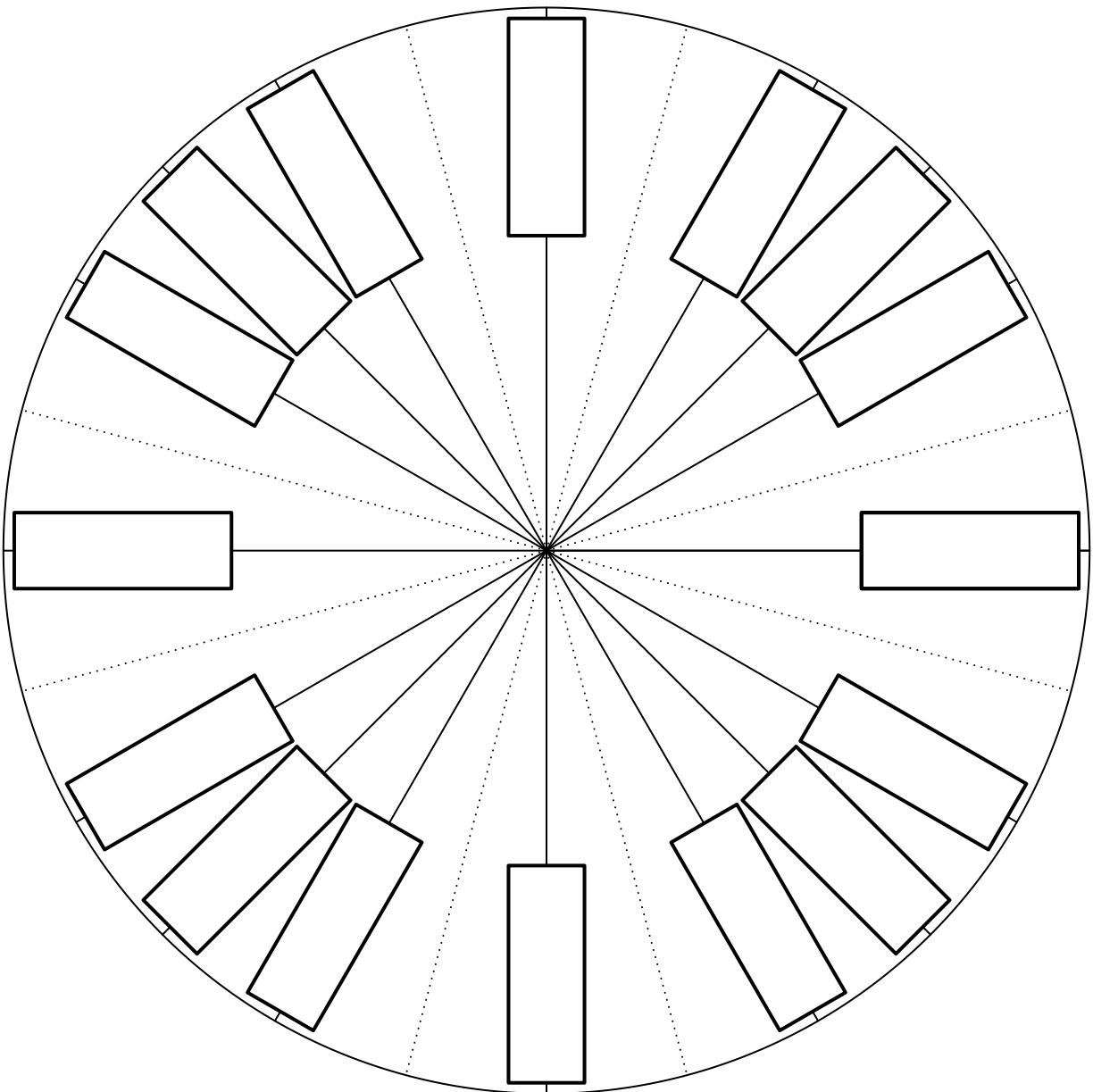
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

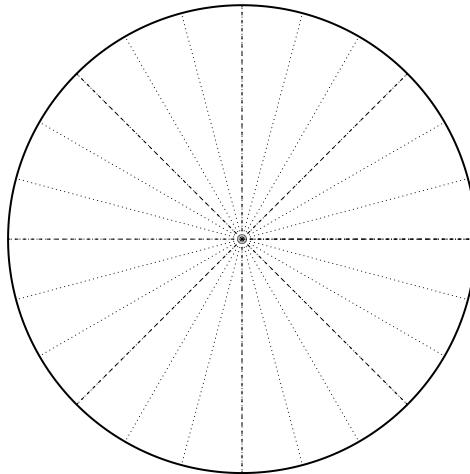
u12 Radians, Degrees, and Arc Length EXAM (version 179)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

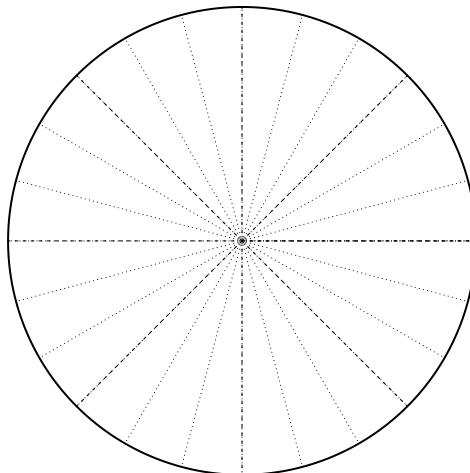


u12 Radians, Degrees, and Arc Length EXAM (version 179)

2. On the circle below, draw a sketch of a -570° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{47\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



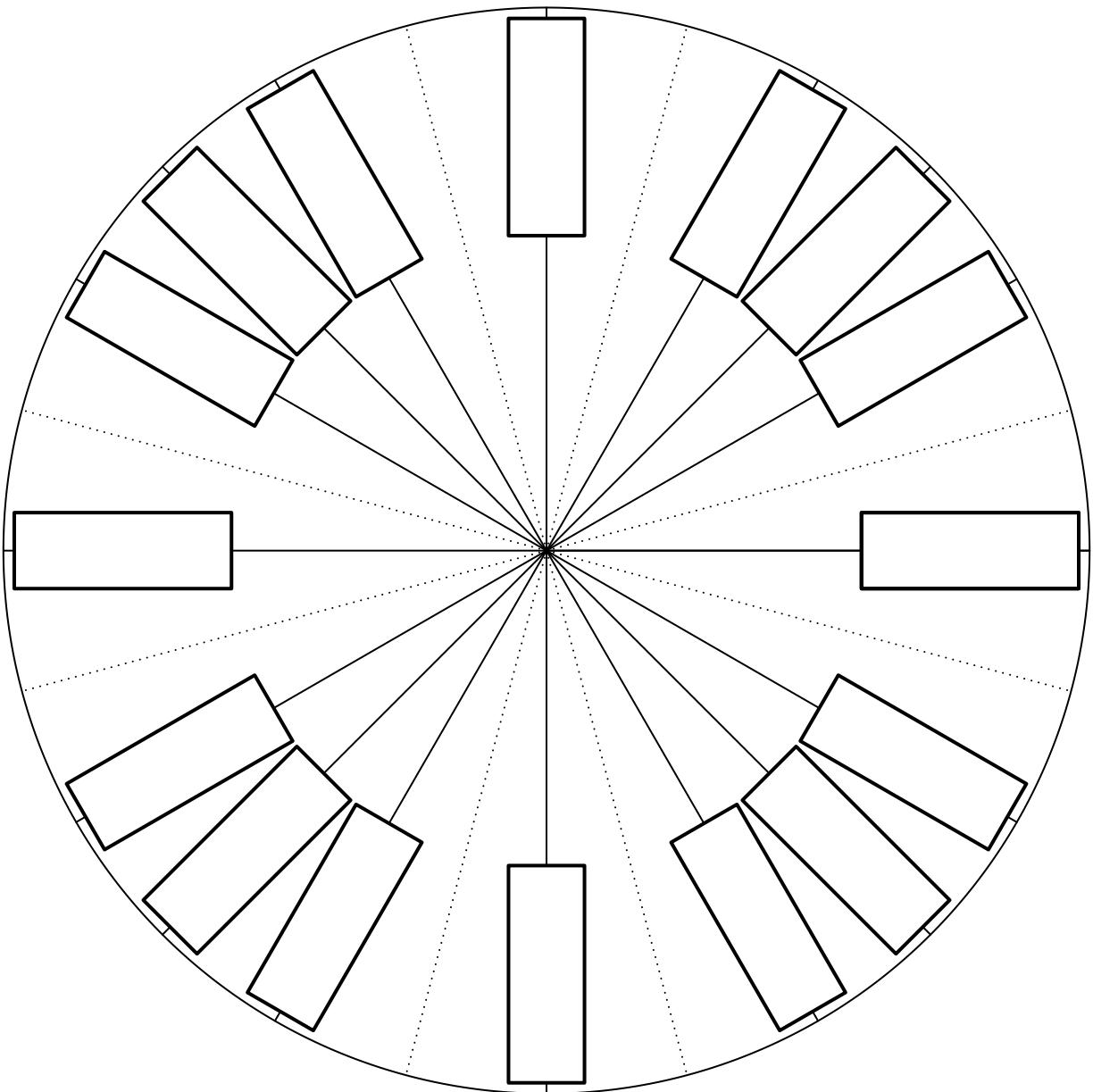
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 12 meters. Find θ .

Name: _____

Date: _____

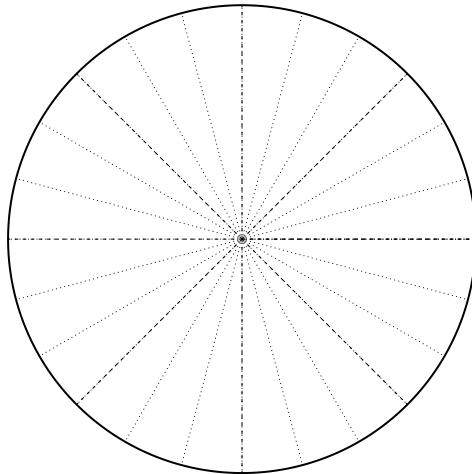
u12 Radians, Degrees, and Arc Length EXAM (version 180)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

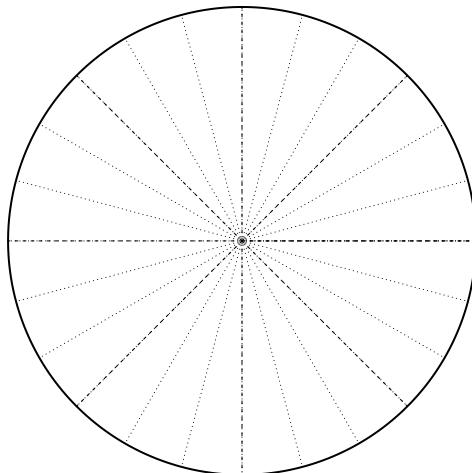


u12 Radians, Degrees, and Arc Length EXAM (version 180)

2. On the circle below, draw a sketch of a 495° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



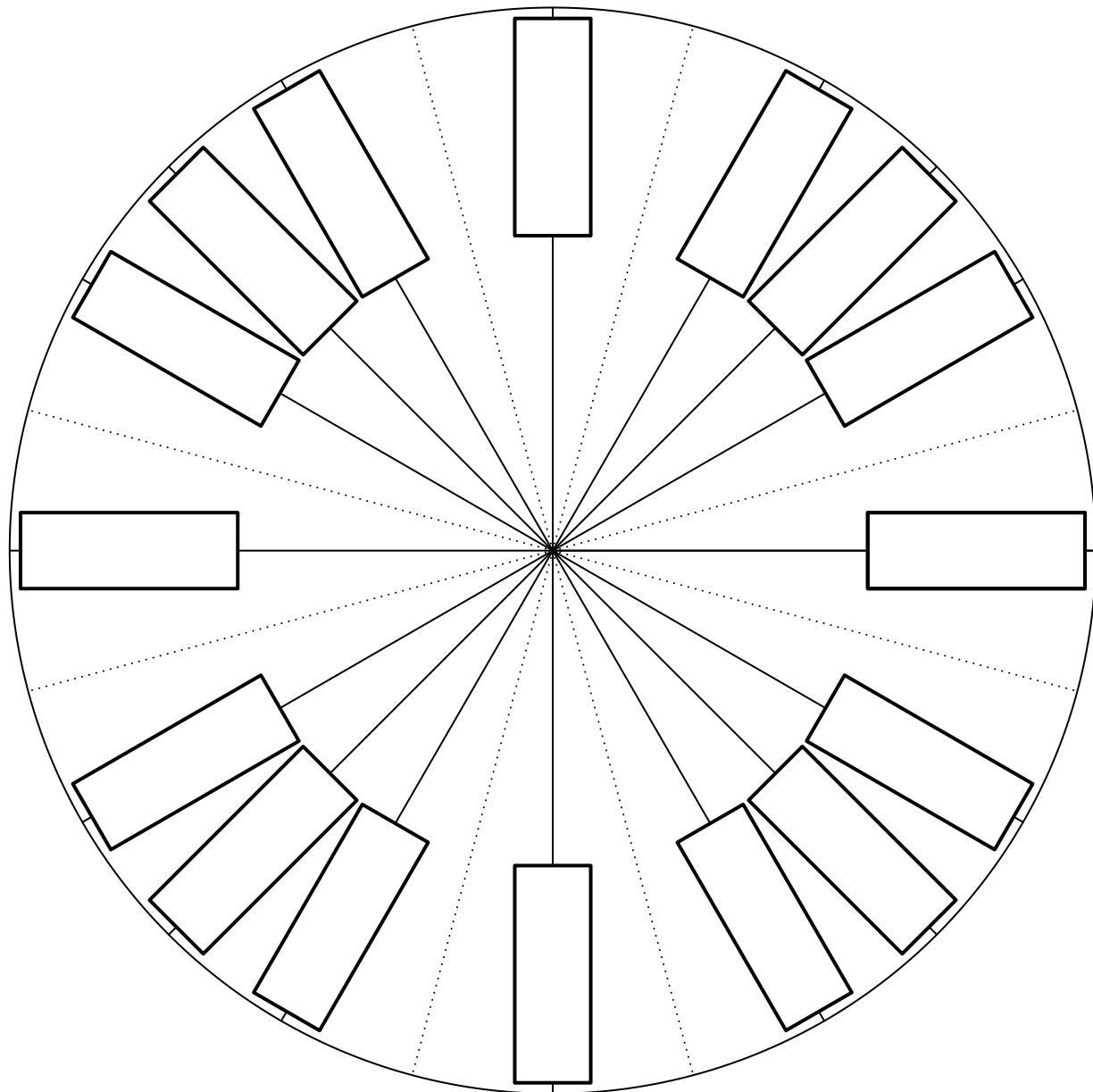
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 6 meters. Find r .

Name: _____

Date: _____

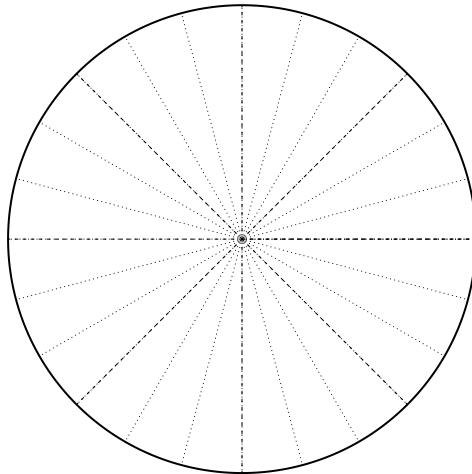
u12 Radians, Degrees, and Arc Length EXAM (version 181)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

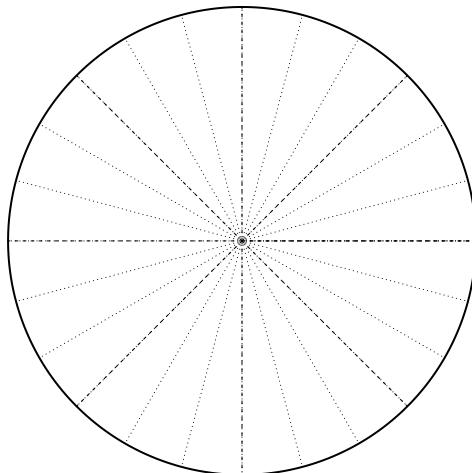


u12 Radians, Degrees, and Arc Length EXAM (version 181)

2. On the circle below, draw a sketch of a 570° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-27\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



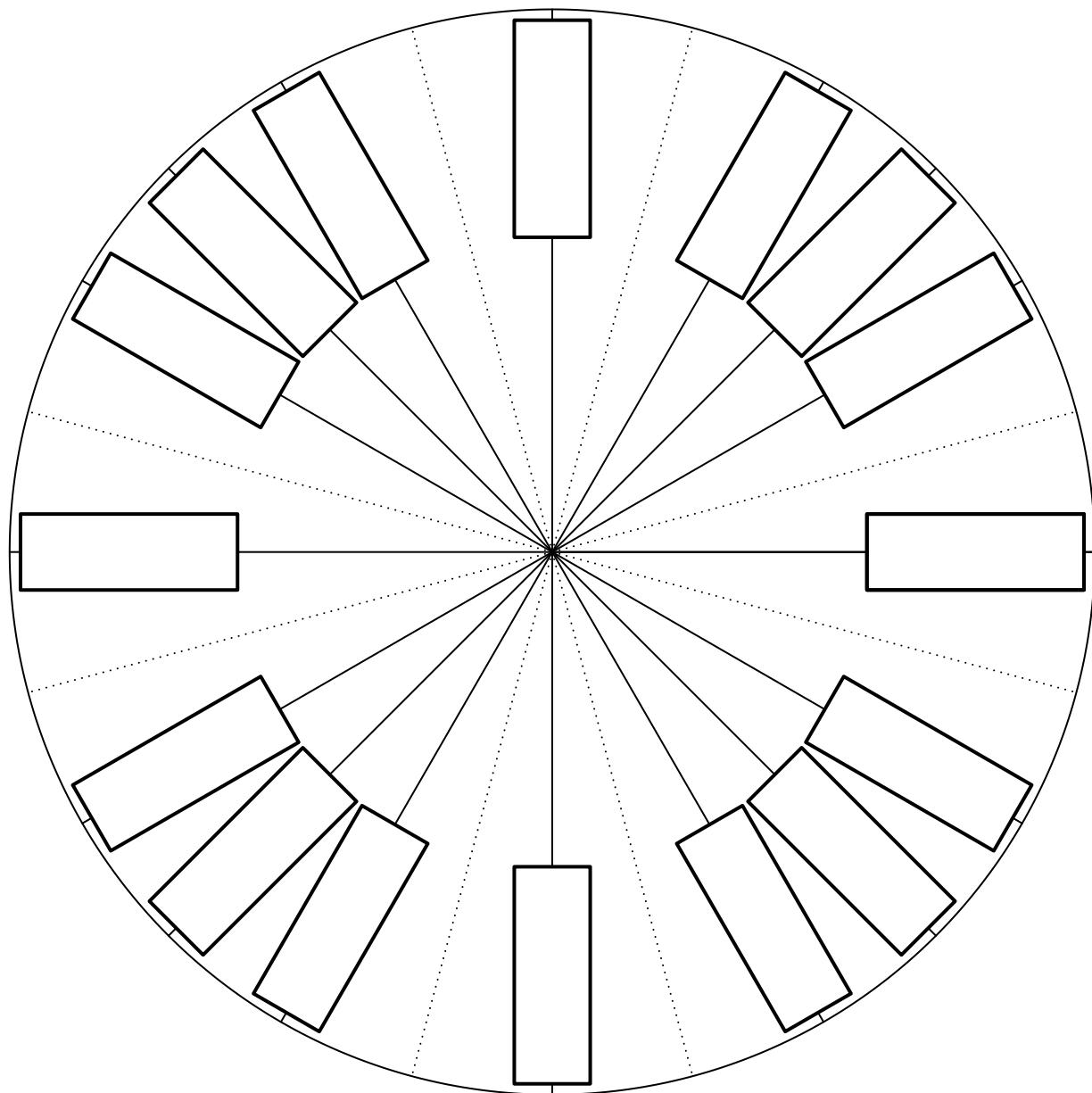
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 2 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

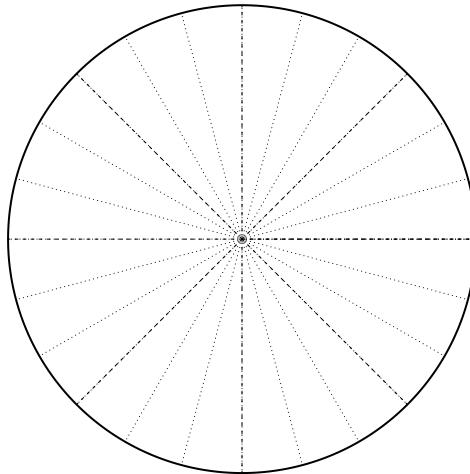
u12 Radians, Degrees, and Arc Length EXAM (version 182)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

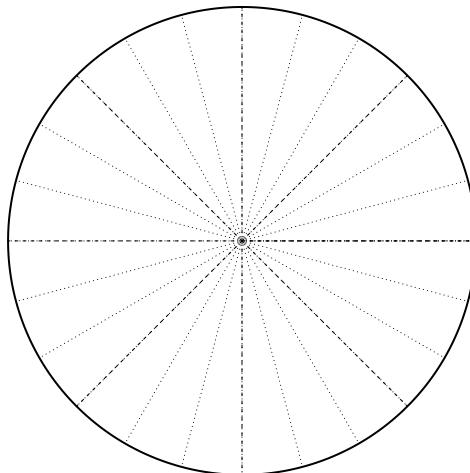


u12 Radians, Degrees, and Arc Length EXAM (version 182)

2. On the circle below, draw a sketch of a 870° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-14\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



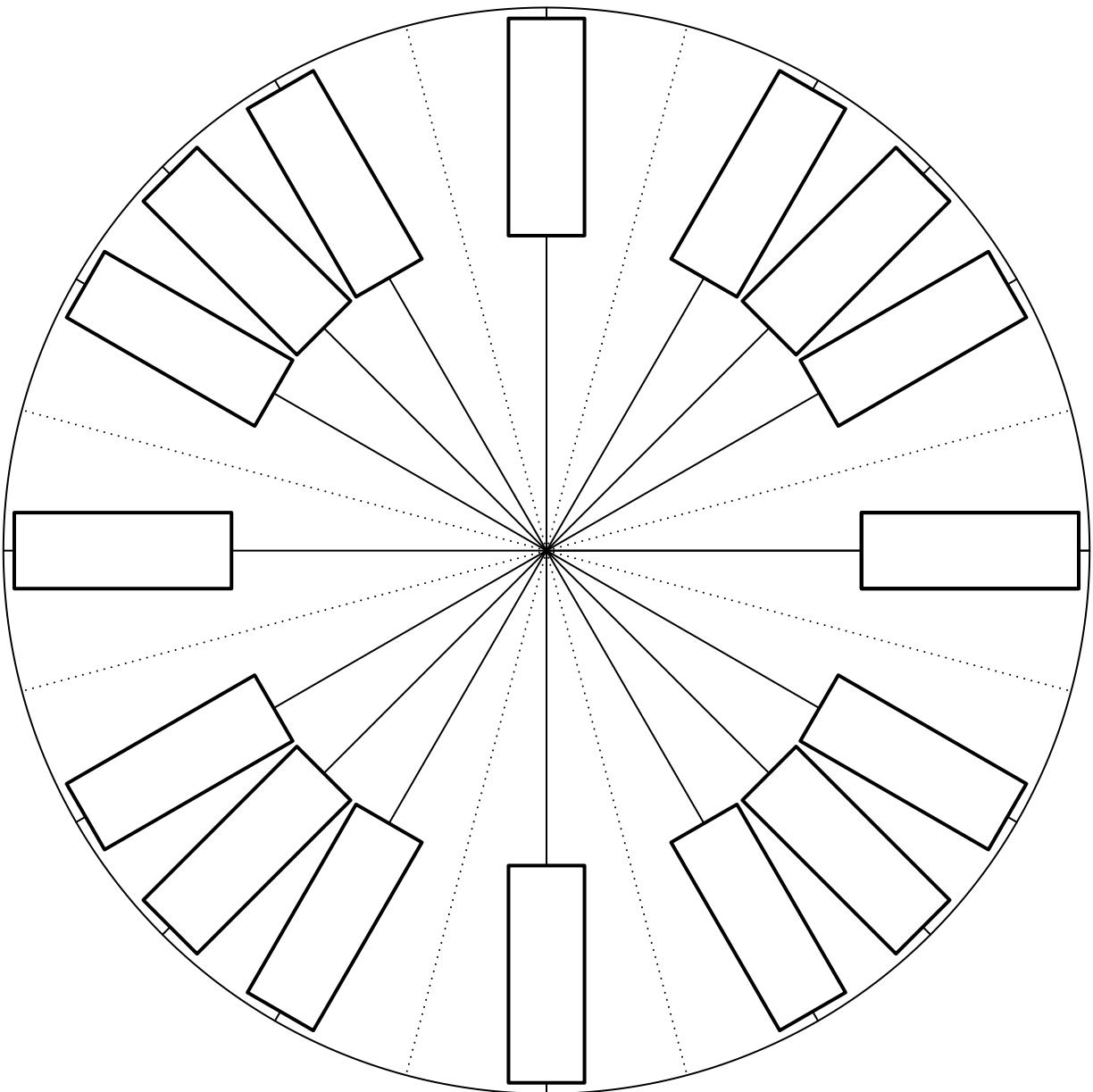
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 20 meters. Find r .

Name: _____

Date: _____

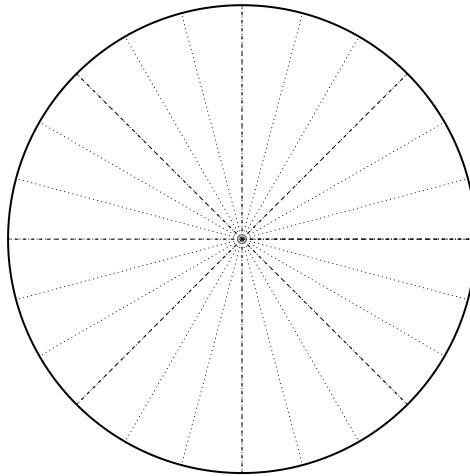
u12 Radians, Degrees, and Arc Length EXAM (version 183)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

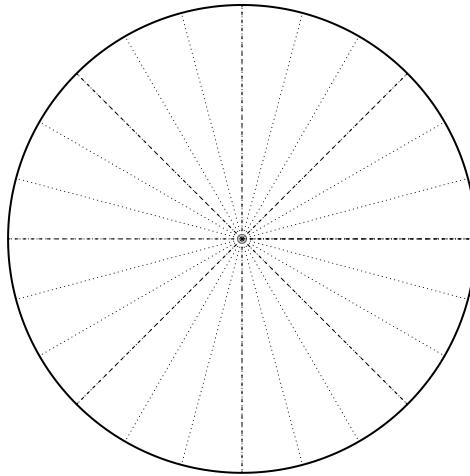


u12 Radians, Degrees, and Arc Length EXAM (version 183)

2. On the circle below, draw a sketch of a -960° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-13\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



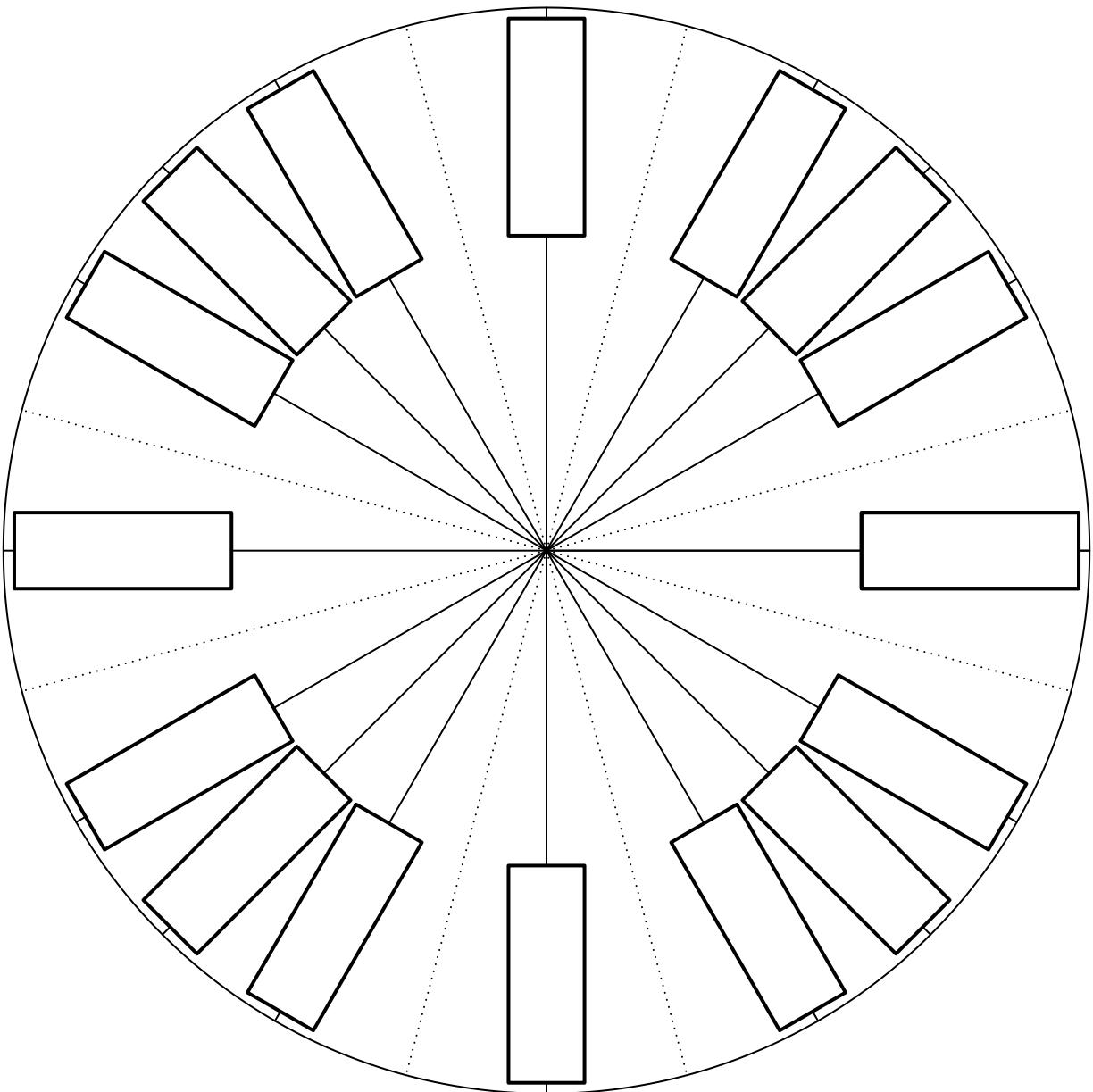
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals θ radians. The arc length equals 18 meters. Find θ .

Name: _____

Date: _____

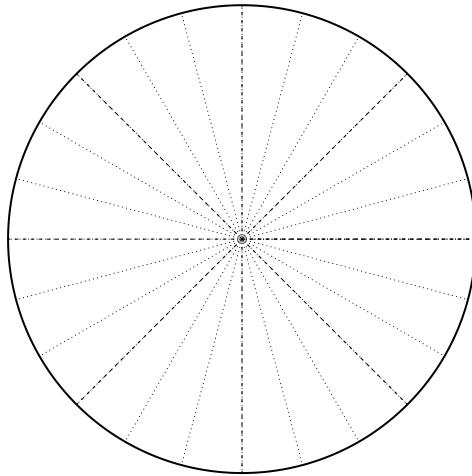
u12 Radians, Degrees, and Arc Length EXAM (version 184)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

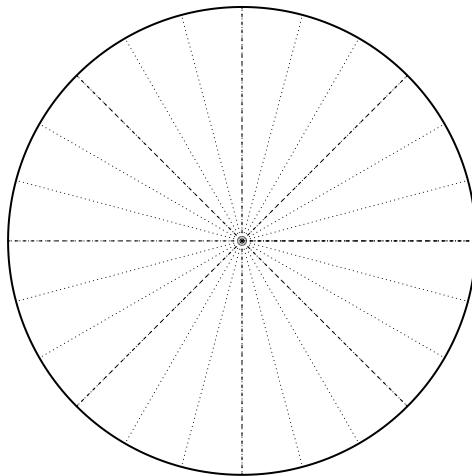


u12 Radians, Degrees, and Arc Length EXAM (version 184)

2. On the circle below, draw a sketch of a 1290° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



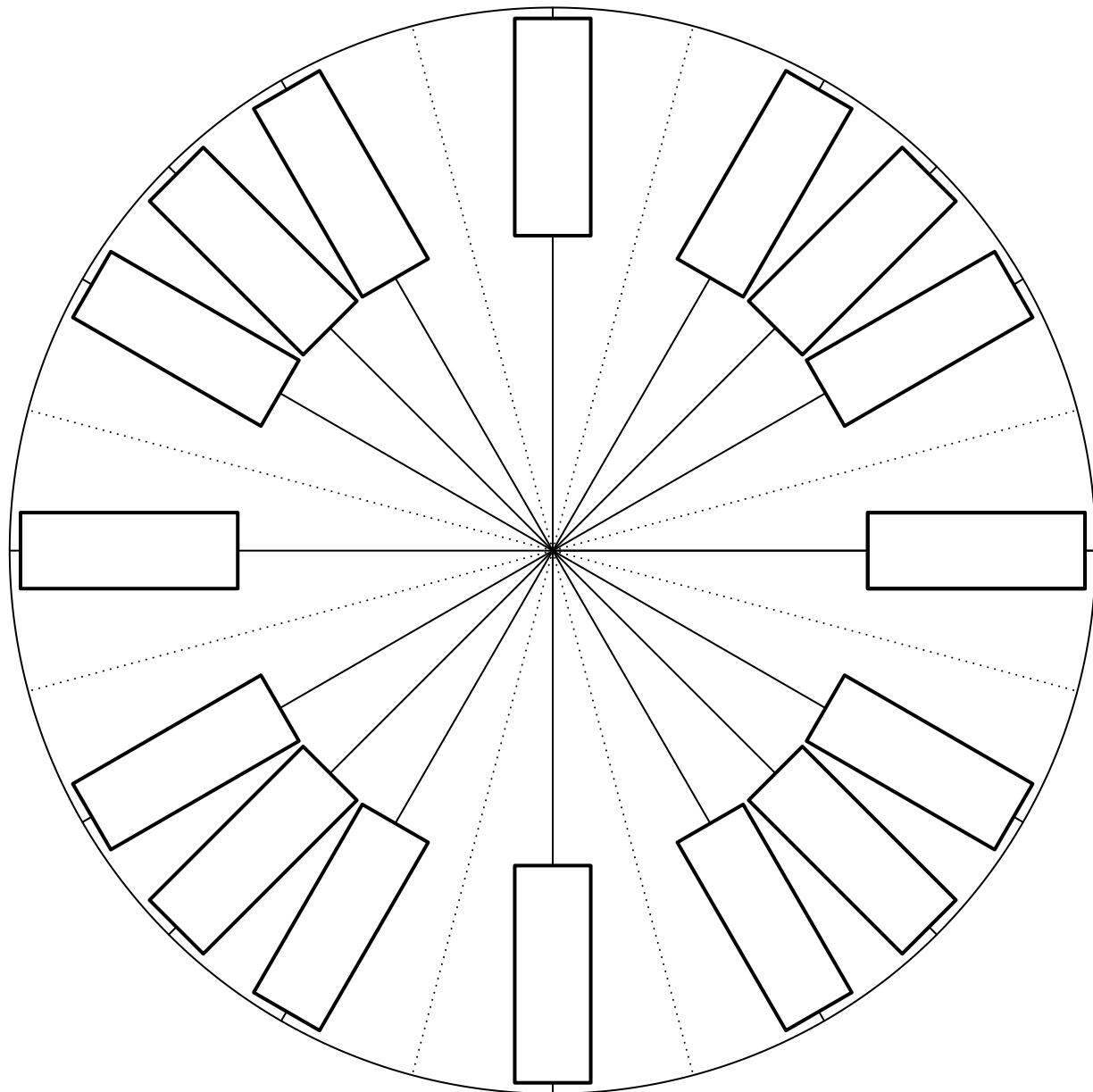
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 3 radians. The arc length equals 6 meters. Find r .

Name: _____

Date: _____

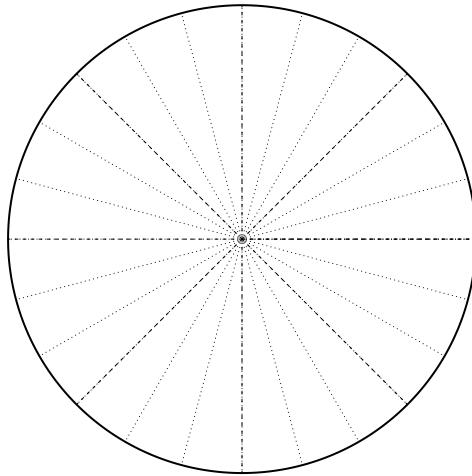
u12 Radians, Degrees, and Arc Length EXAM (version 185)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

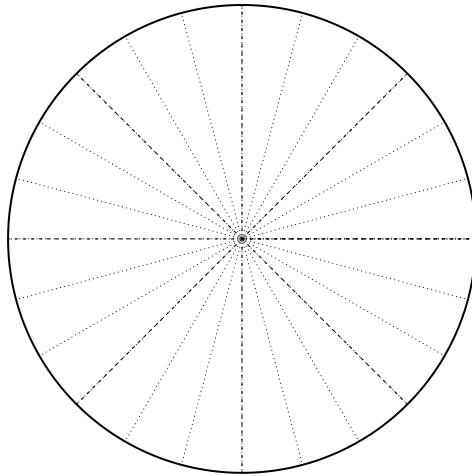


u12 Radians, Degrees, and Arc Length EXAM (version 185)

2. On the circle below, draw a sketch of a 1350° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-13\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



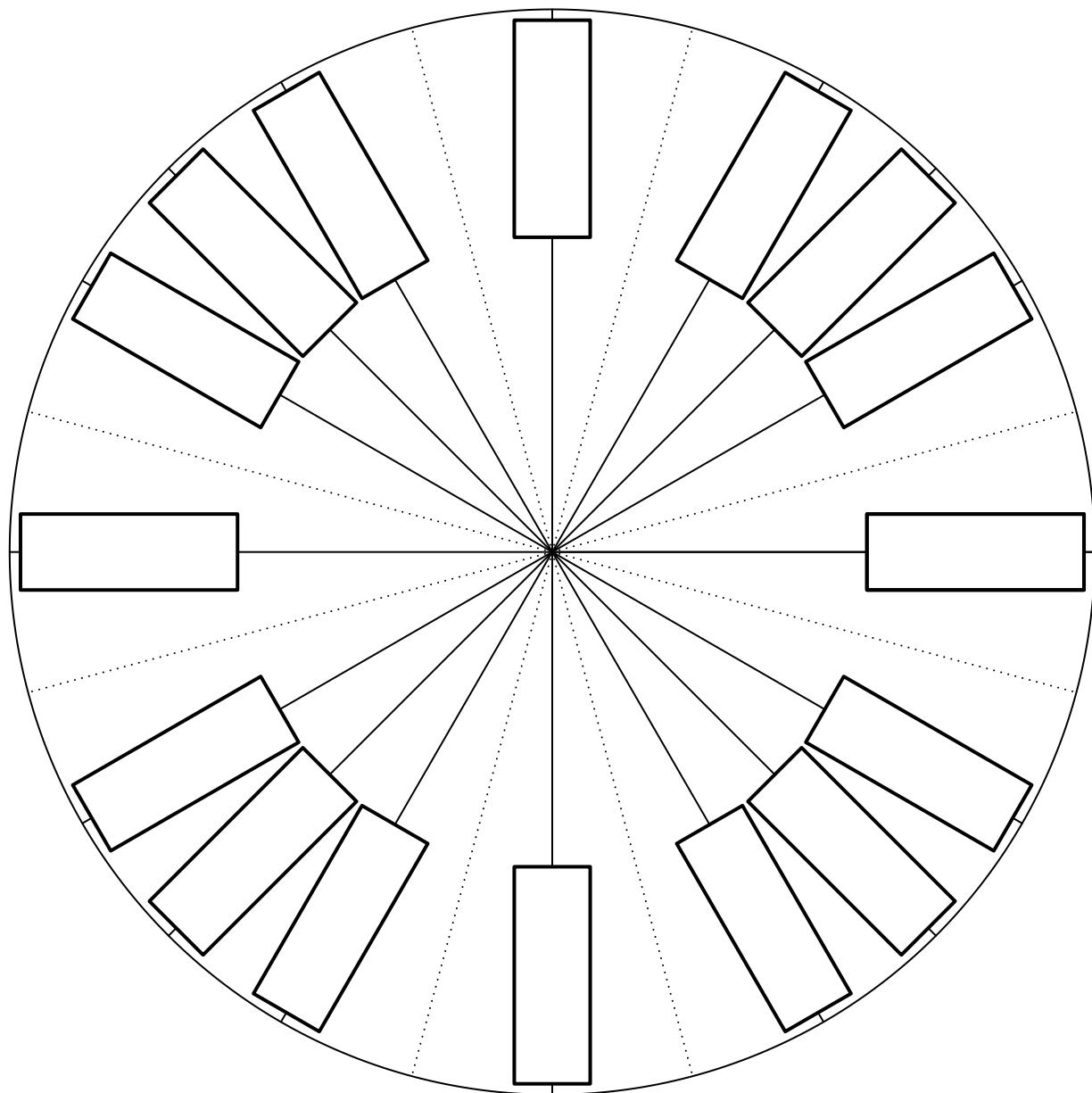
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 4 radians. The arc length equals 24 meters. Find r .

Name: _____

Date: _____

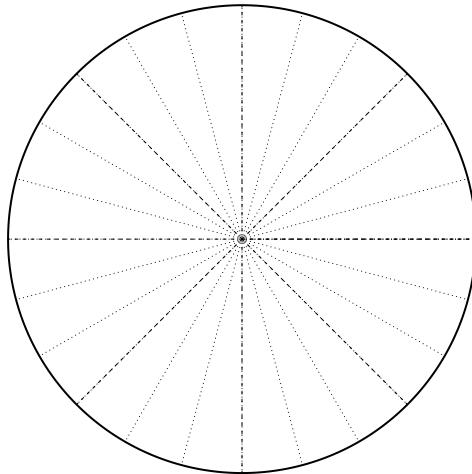
u12 Radians, Degrees, and Arc Length EXAM (version 186)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

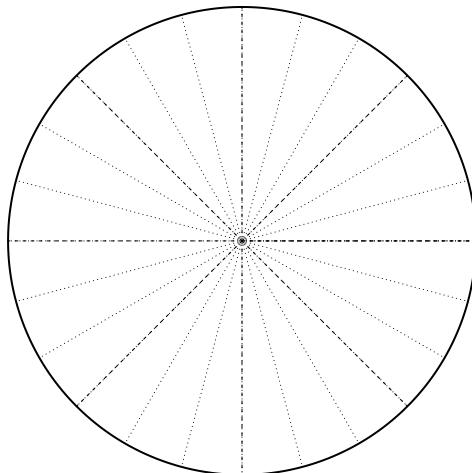


u12 Radians, Degrees, and Arc Length EXAM (version 186)

2. On the circle below, draw a sketch of a -780° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{11\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



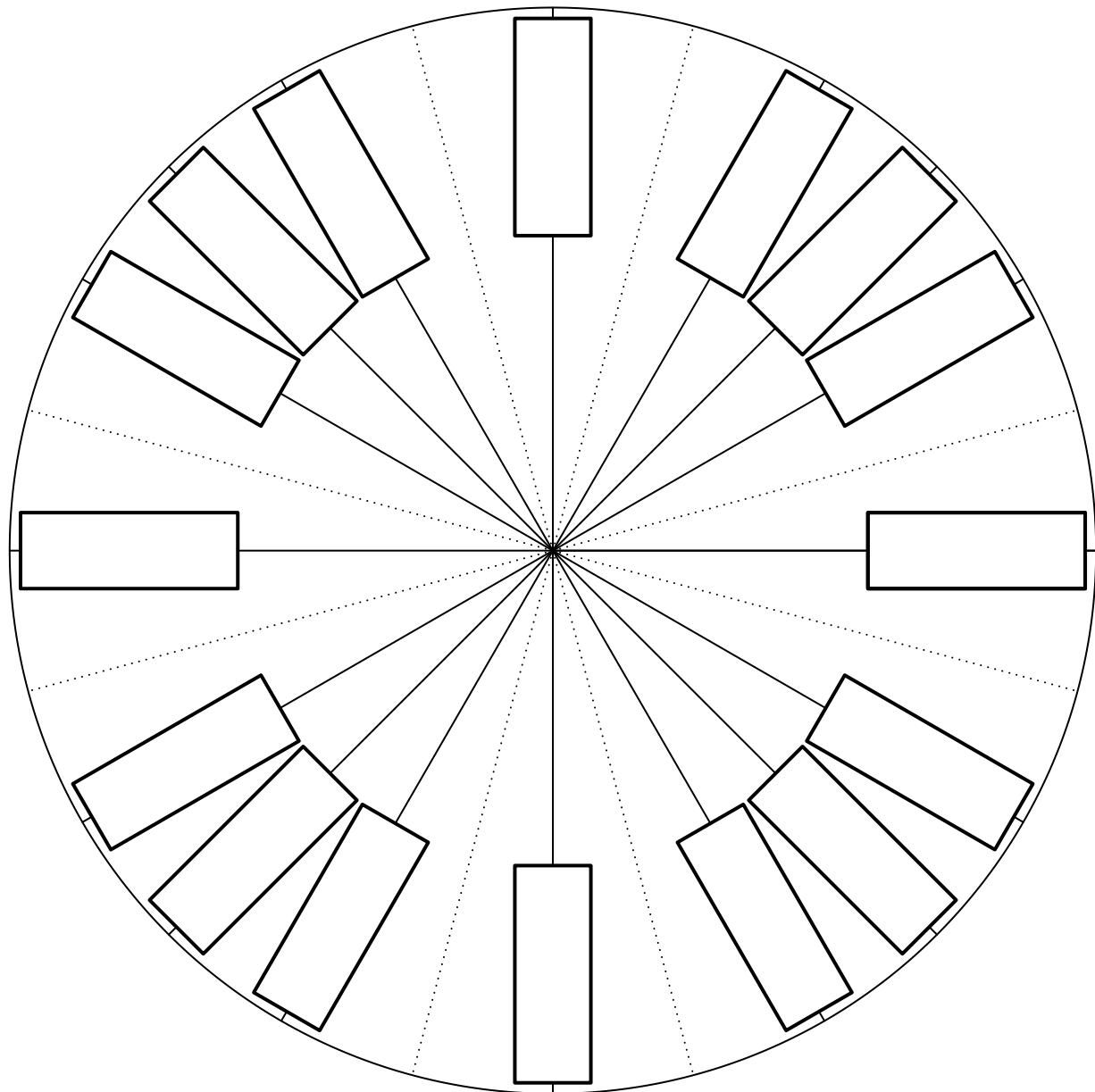
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals θ radians. The arc length equals 6 meters. Find θ .

Name: _____

Date: _____

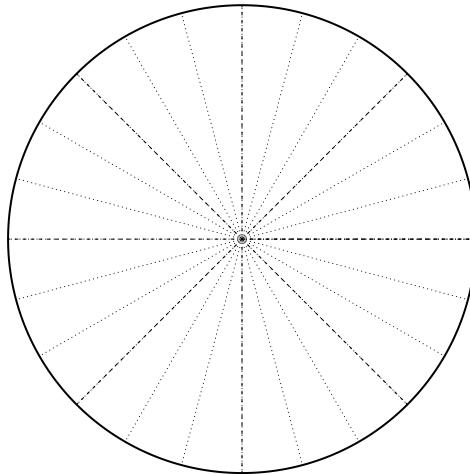
u12 Radians, Degrees, and Arc Length EXAM (version 187)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

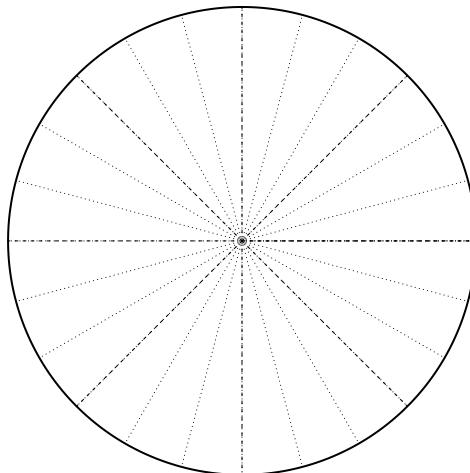


u12 Radians, Degrees, and Arc Length EXAM (version 187)

2. On the circle below, draw a sketch of a -1170° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-13\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



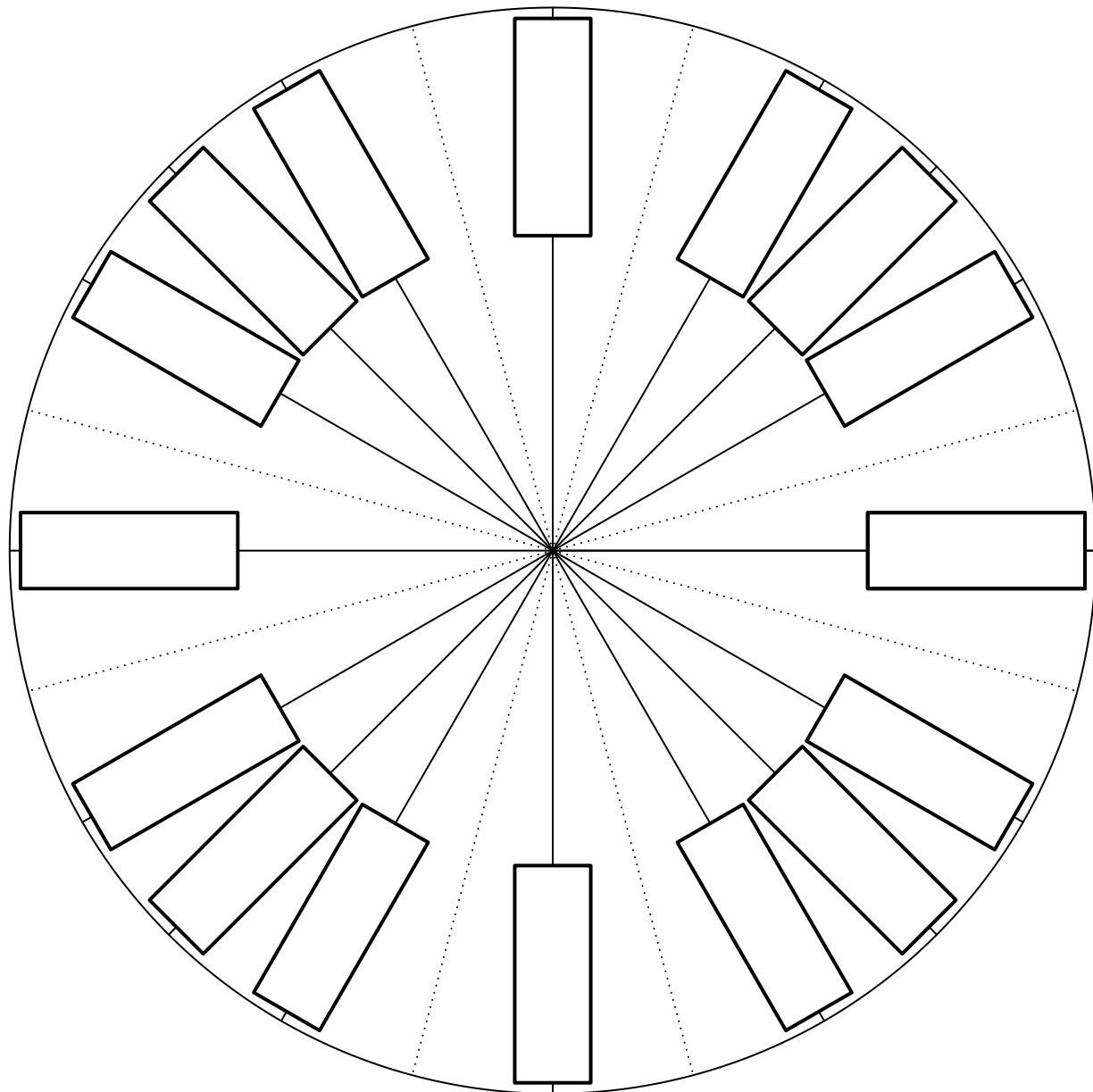
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 5 radians. The arc length equals 30 meters. Find r .

Name: _____

Date: _____

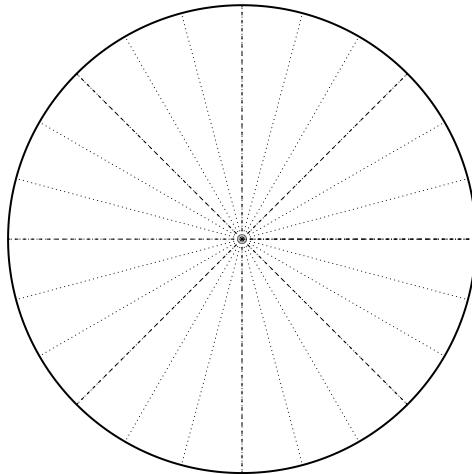
u12 Radians, Degrees, and Arc Length EXAM (version 188)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

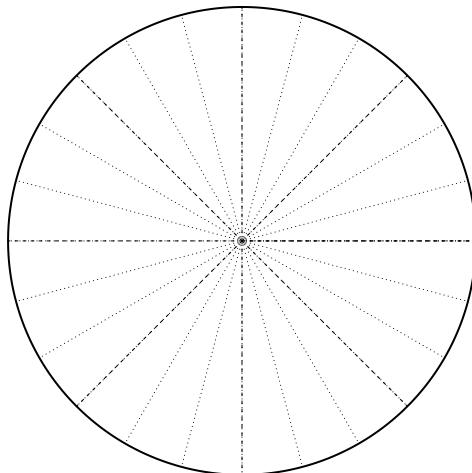


u12 Radians, Degrees, and Arc Length EXAM (version 188)

2. On the circle below, draw a sketch of a -1140° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-17\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



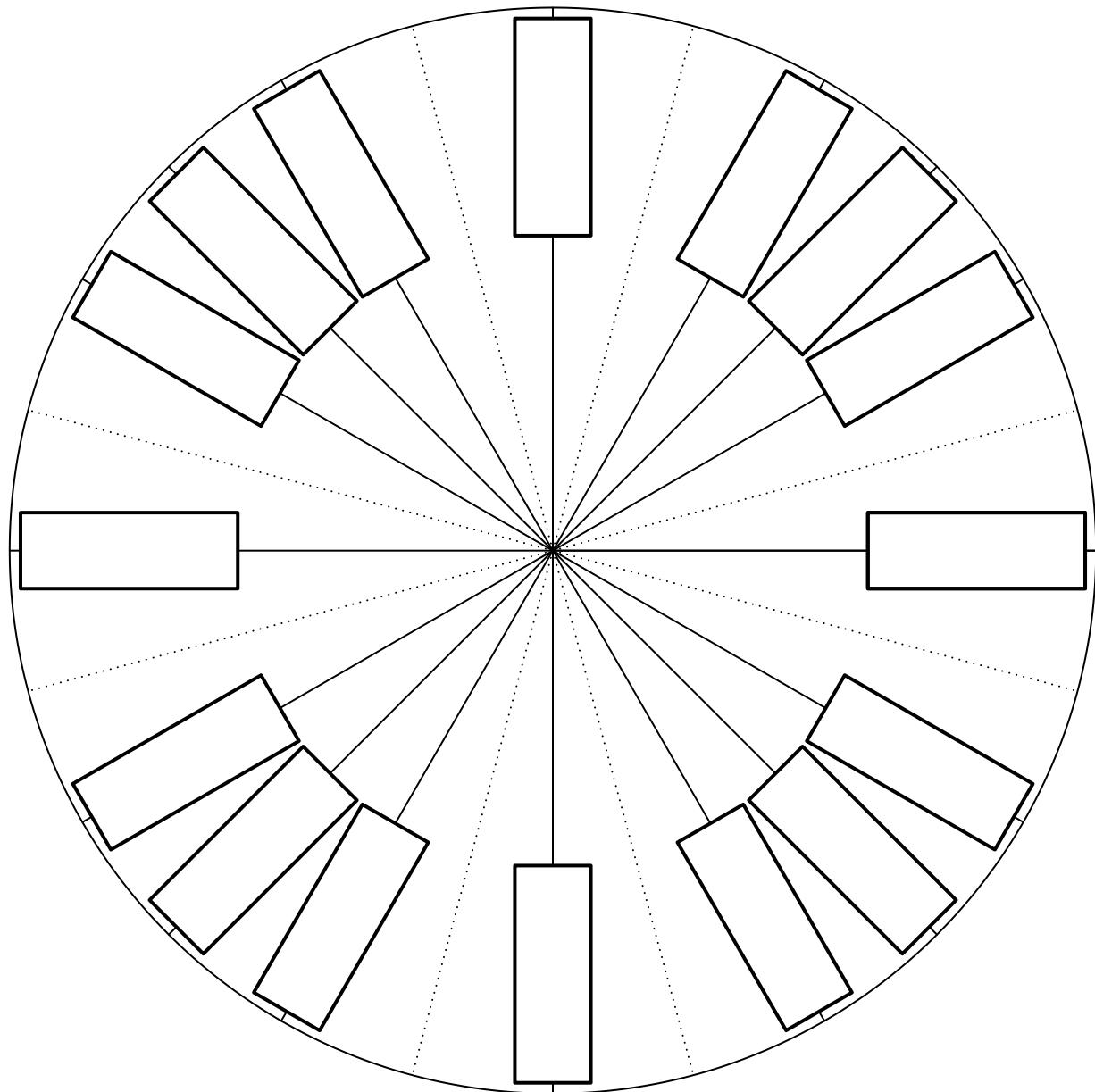
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 4 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

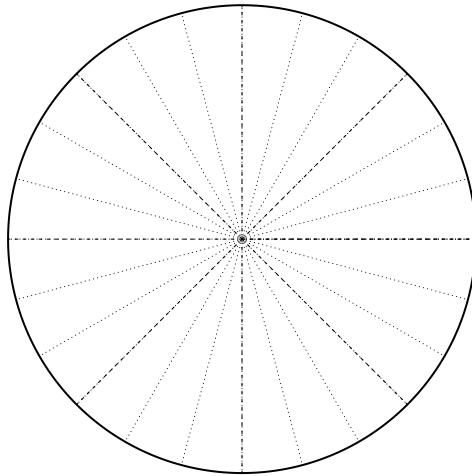
u12 Radians, Degrees, and Arc Length EXAM (version 189)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

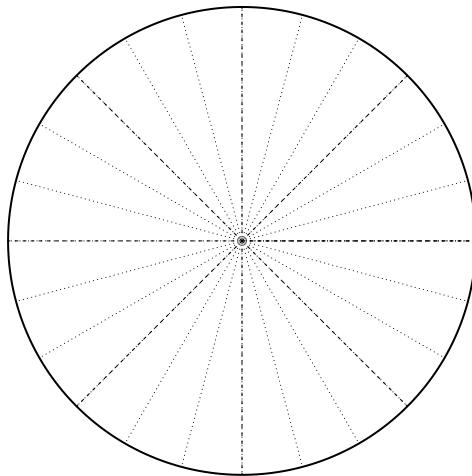


u12 Radians, Degrees, and Arc Length EXAM (version 189)

2. On the circle below, draw a sketch of a -1230° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{10\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



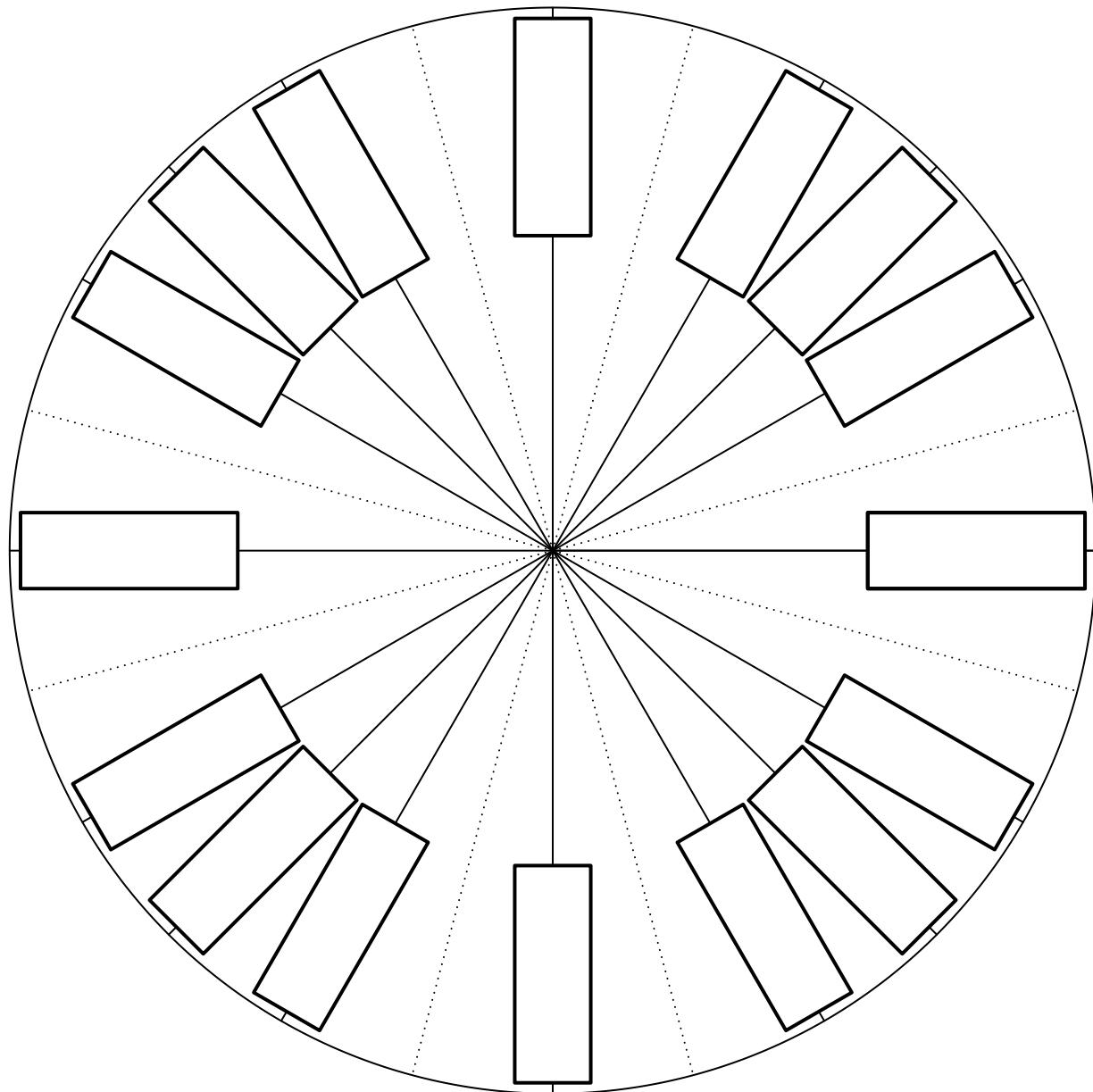
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 6 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

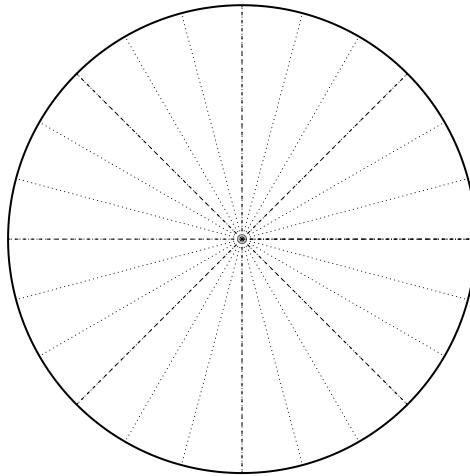
u12 Radians, Degrees, and Arc Length EXAM (version 190)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

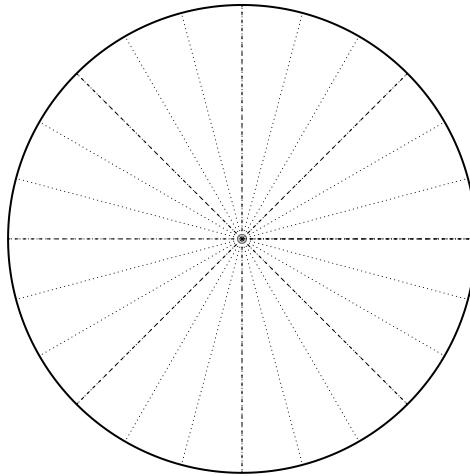


u12 Radians, Degrees, and Arc Length EXAM (version 190)

2. On the circle below, draw a sketch of a 1380° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-9\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



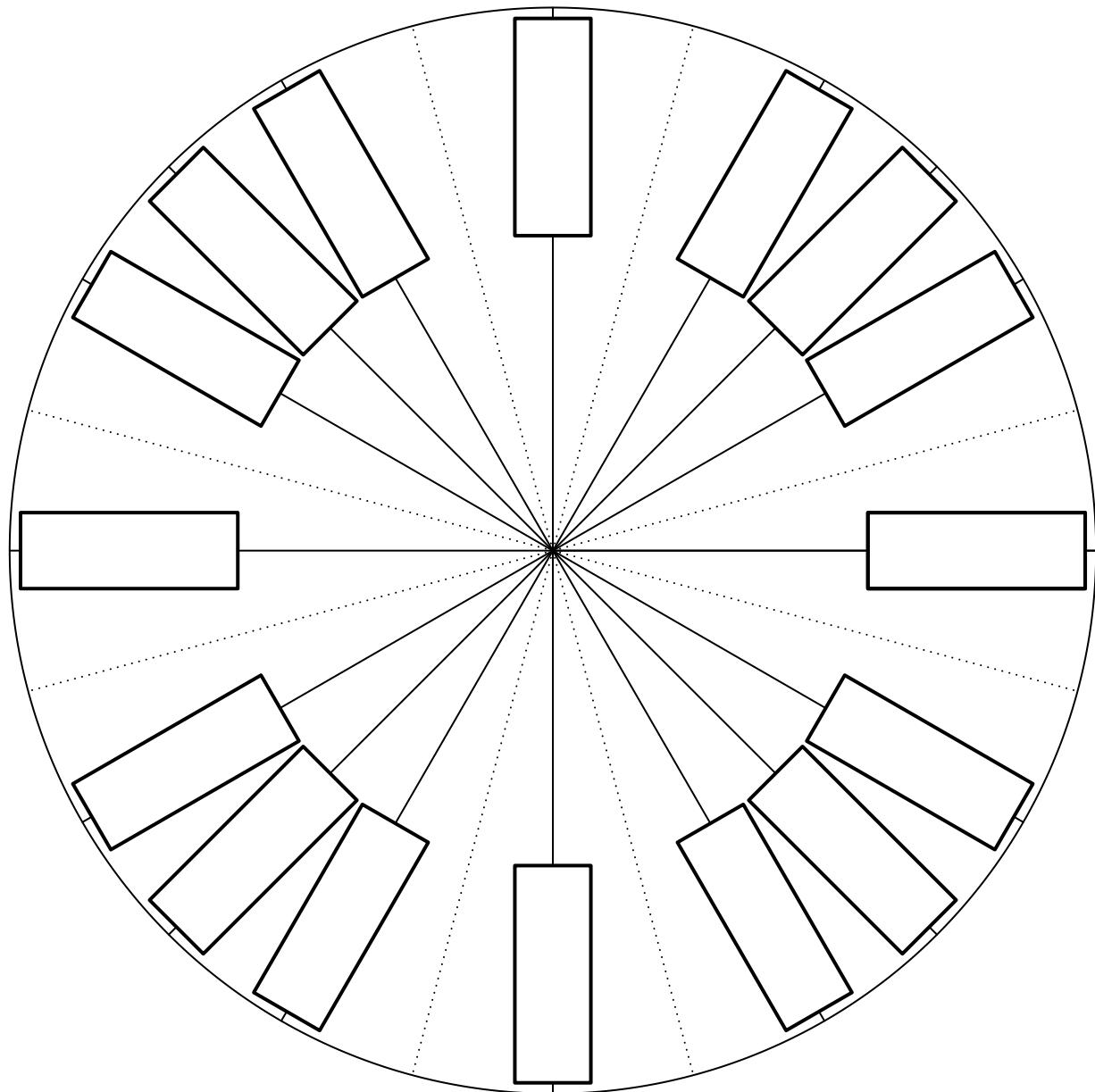
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 24 meters. Find θ .

Name: _____

Date: _____

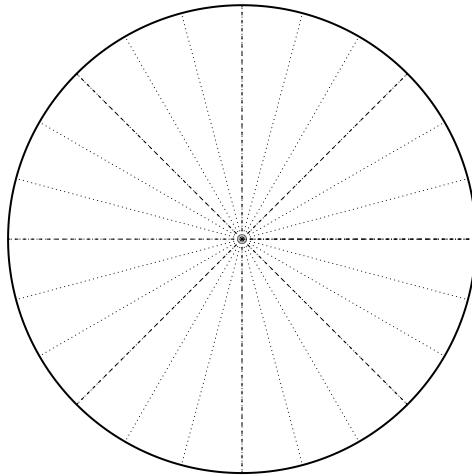
u12 Radians, Degrees, and Arc Length EXAM (version 191)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

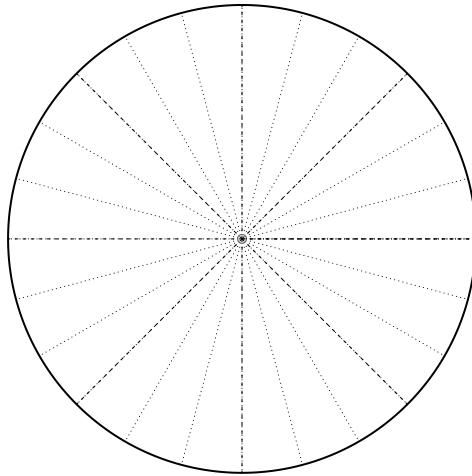


u12 Radians, Degrees, and Arc Length EXAM (version 191)

2. On the circle below, draw a sketch of a 780° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{29\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



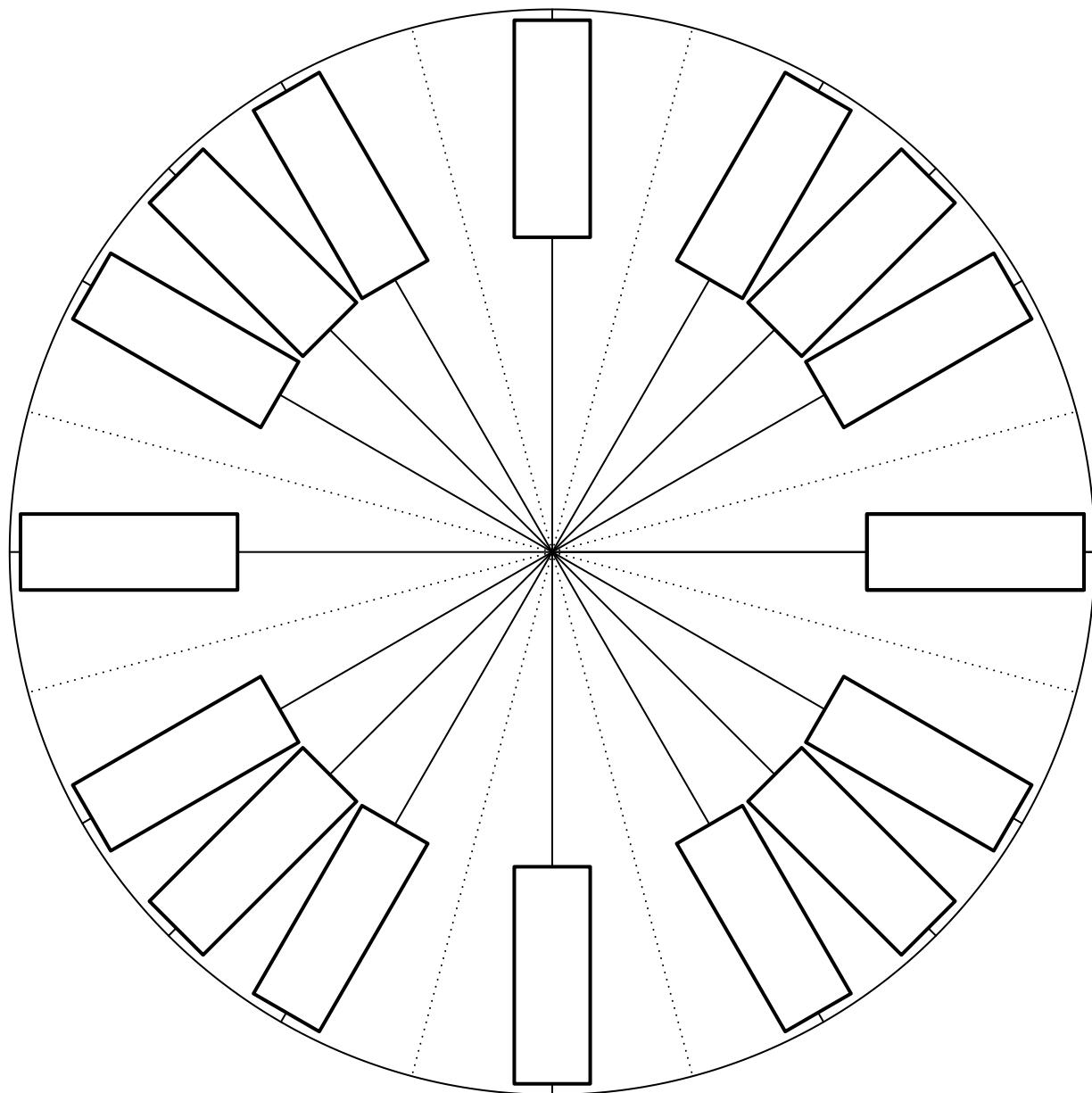
4. Imagine a circle with a central angle subtending an arc. The radius equals 6 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

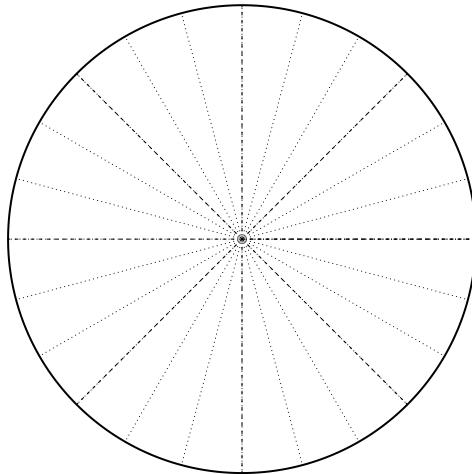
u12 Radians, Degrees, and Arc Length EXAM (version 192)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

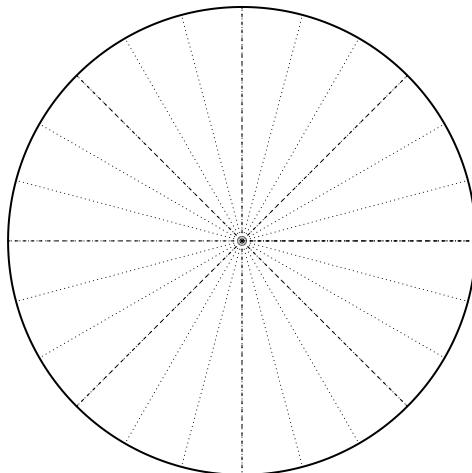


u12 Radians, Degrees, and Arc Length EXAM (version 192)

2. On the circle below, draw a sketch of a 1170° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{11\pi}{2}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



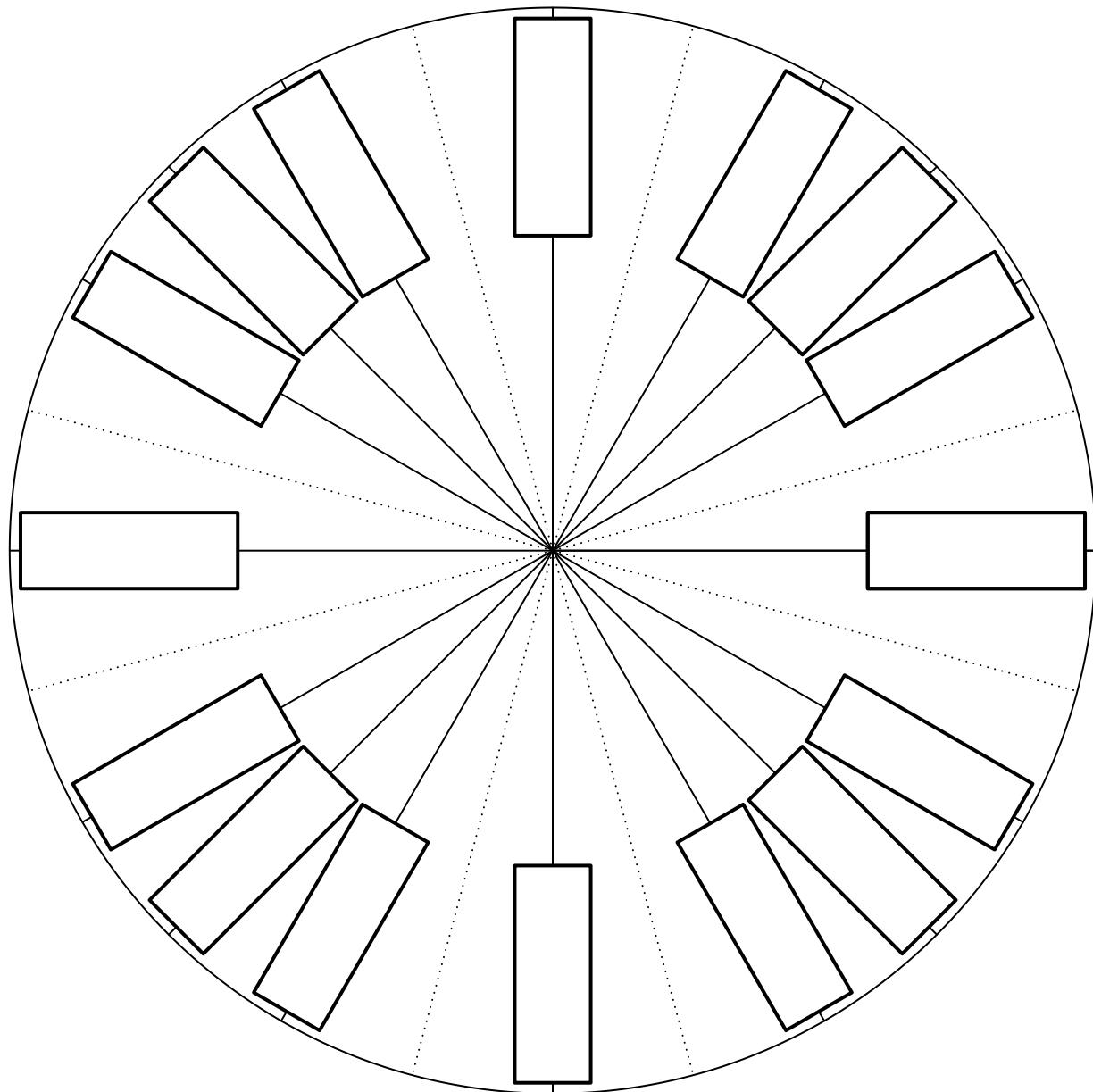
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 30 meters. Find θ .

Name: _____

Date: _____

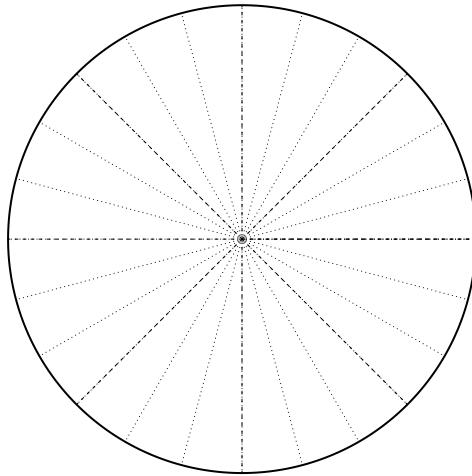
u12 Radians, Degrees, and Arc Length EXAM (version 193)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

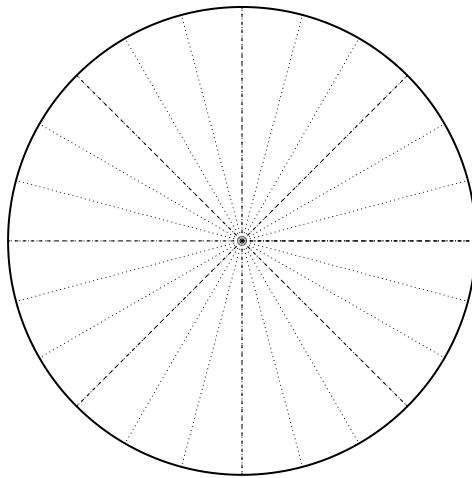


u12 Radians, Degrees, and Arc Length EXAM (version 193)

2. On the circle below, draw a sketch of a 1140° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-23\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



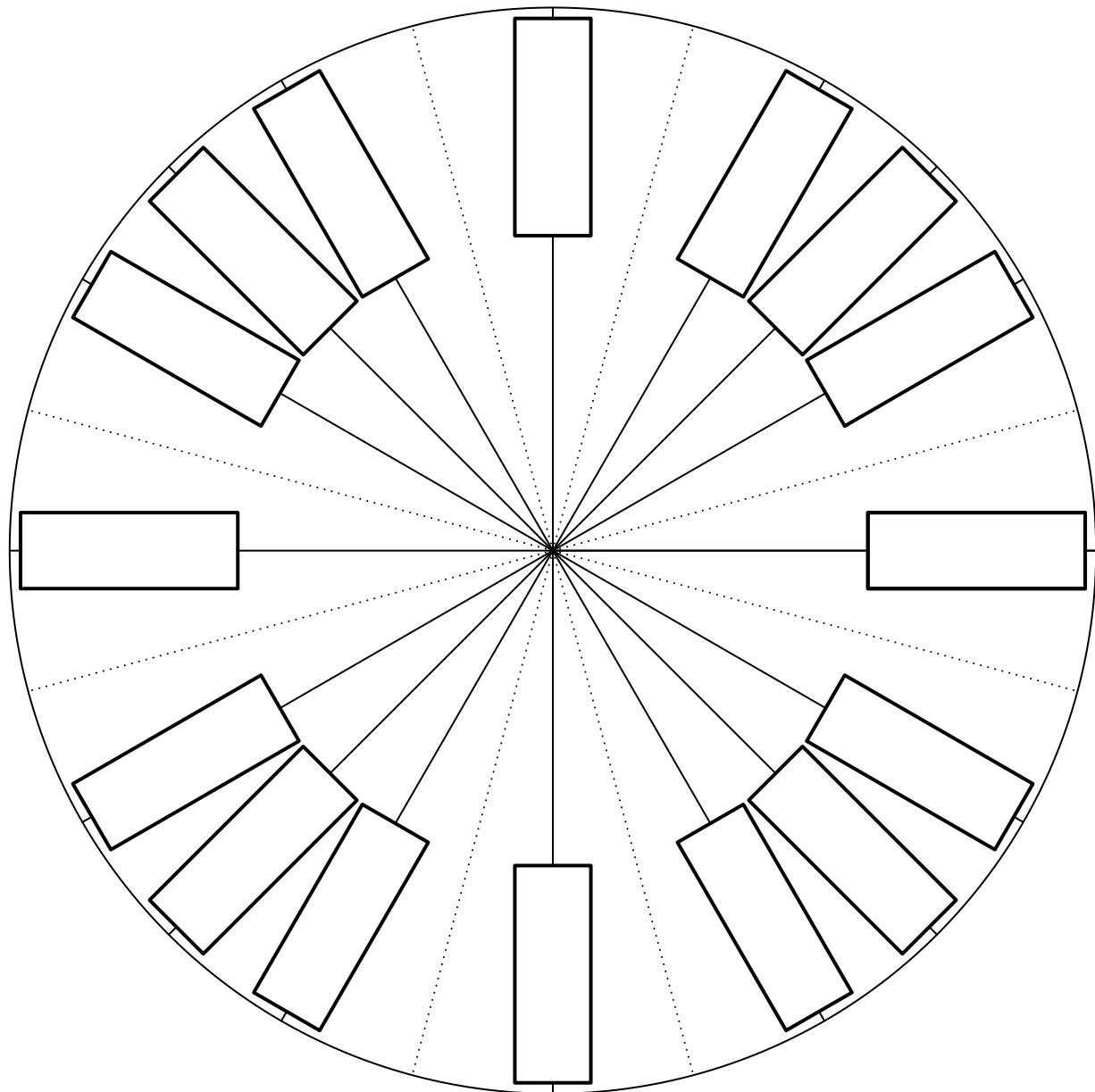
4. Imagine a circle with a central angle subtending an arc. The radius equals 5 meters. The central angle equals θ radians. The arc length equals 15 meters. Find θ .

Name: _____

Date: _____

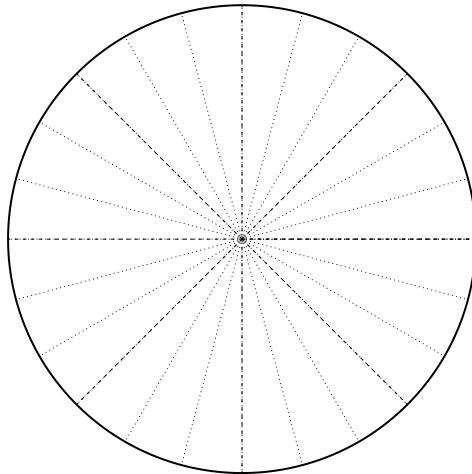
u12 Radians, Degrees, and Arc Length EXAM (version 194)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

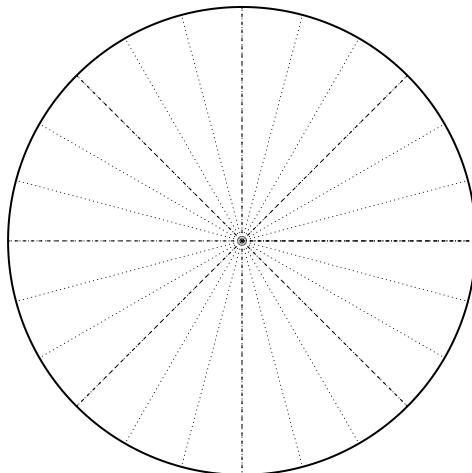


u12 Radians, Degrees, and Arc Length EXAM (version 194)

2. On the circle below, draw a sketch of a 1350° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-21\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



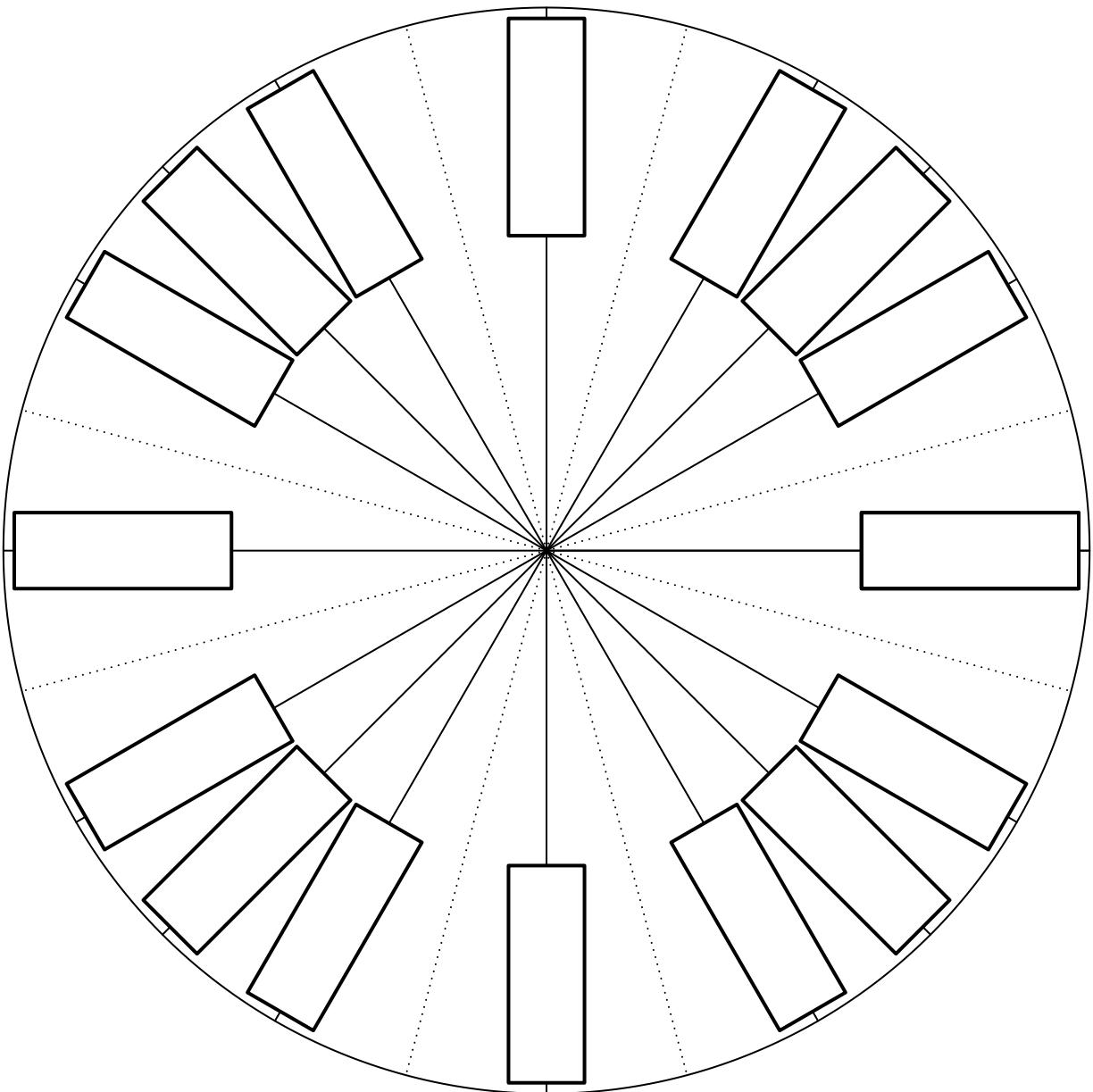
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 10 meters. Find r .

Name: _____

Date: _____

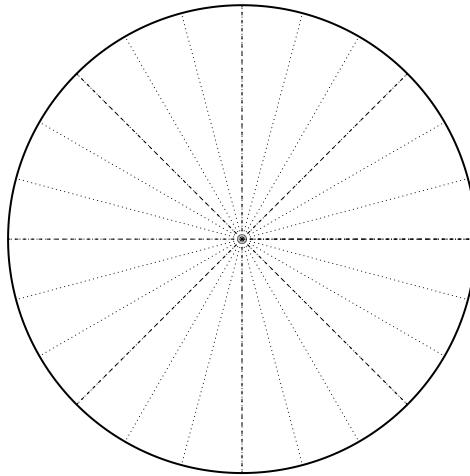
u12 Radians, Degrees, and Arc Length EXAM (version 195)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

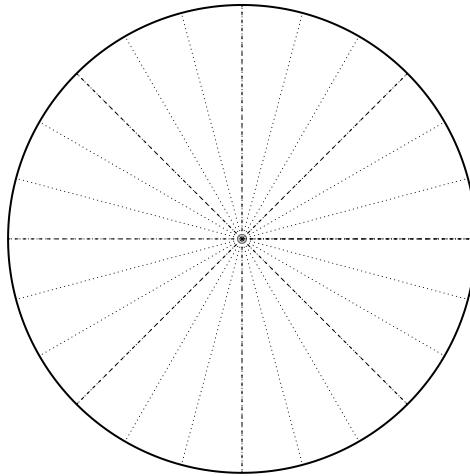


u12 Radians, Degrees, and Arc Length EXAM (version 195)

2. On the circle below, draw a sketch of a -855° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-41\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



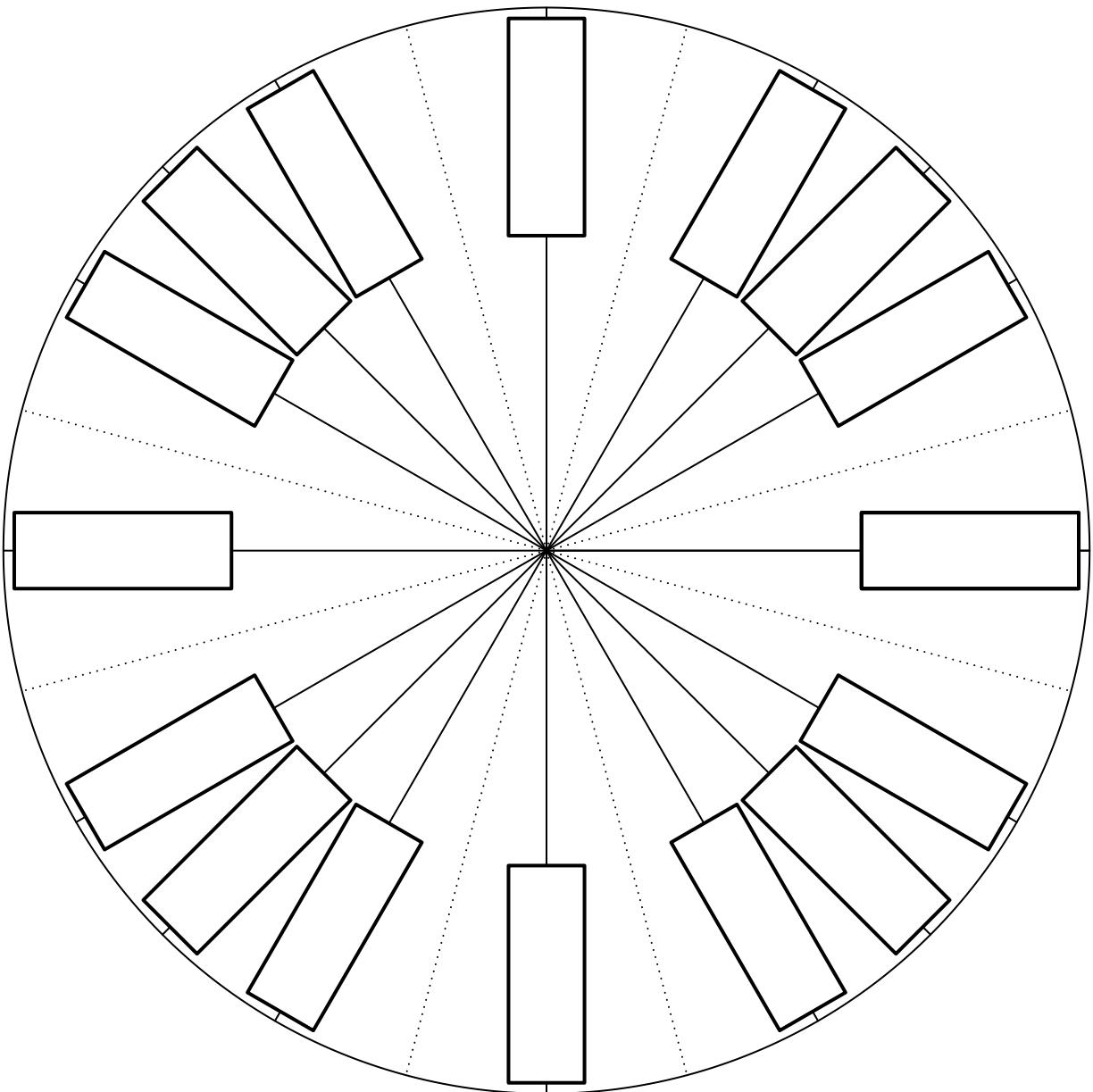
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 6 radians. The arc length equals 18 meters. Find r .

Name: _____

Date: _____

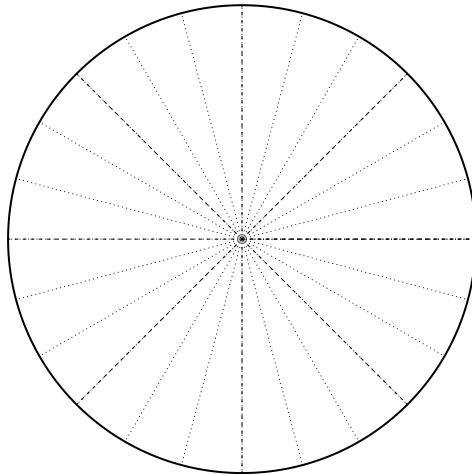
u12 Radians, Degrees, and Arc Length EXAM (version 196)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

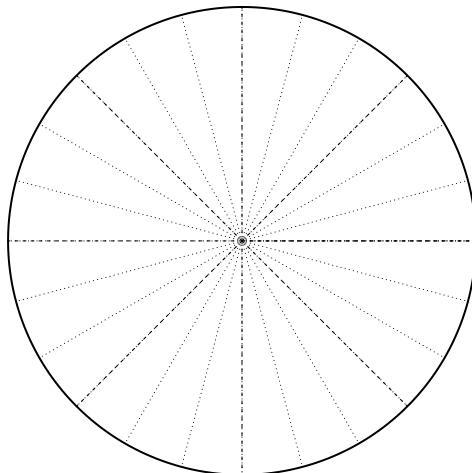


u12 Radians, Degrees, and Arc Length EXAM (version 196)

2. On the circle below, draw a sketch of a 840° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{43\pi}{6}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



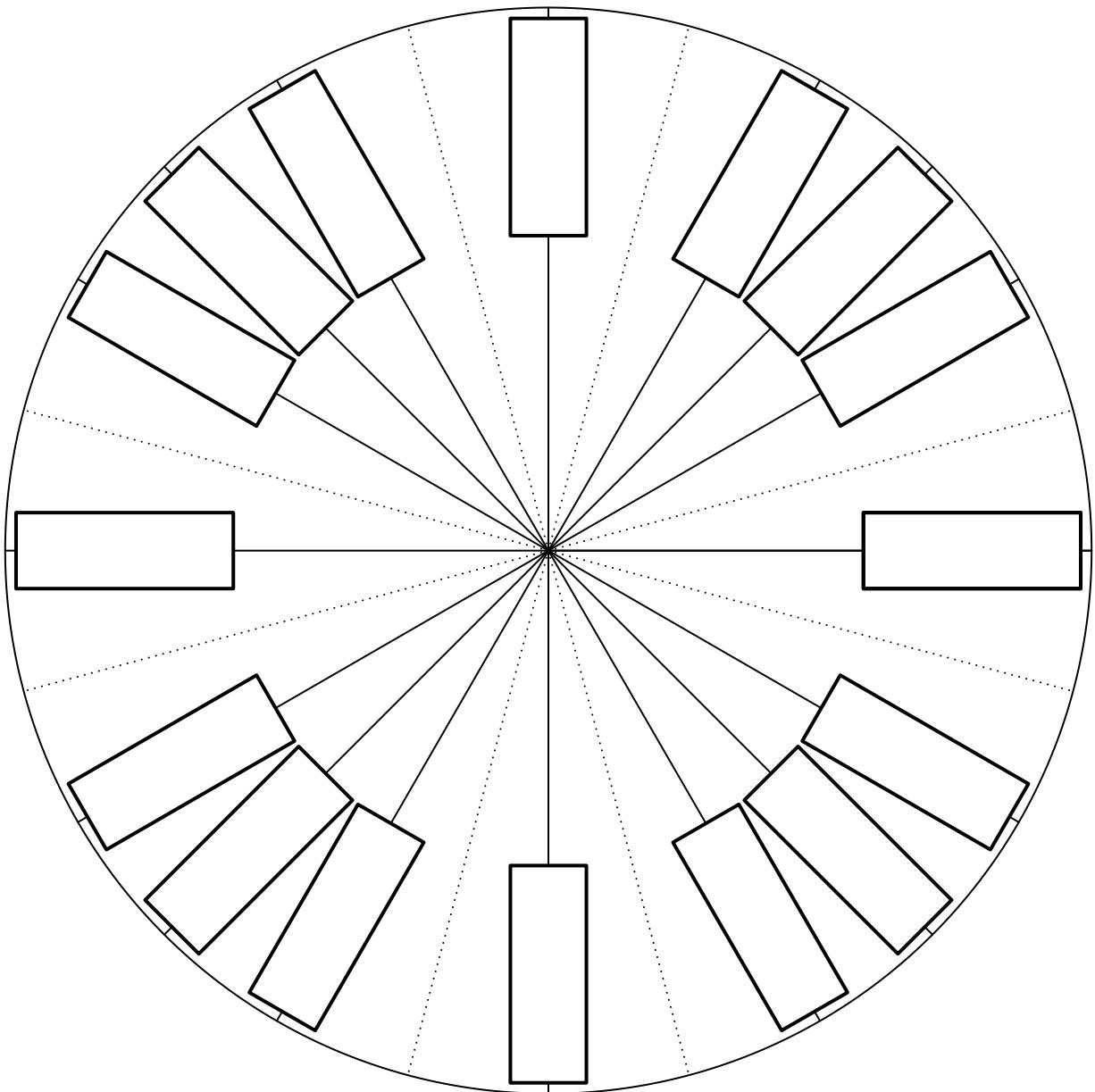
4. Imagine a circle with a central angle subtending an arc. The radius equals 2 meters. The central angle equals 6 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

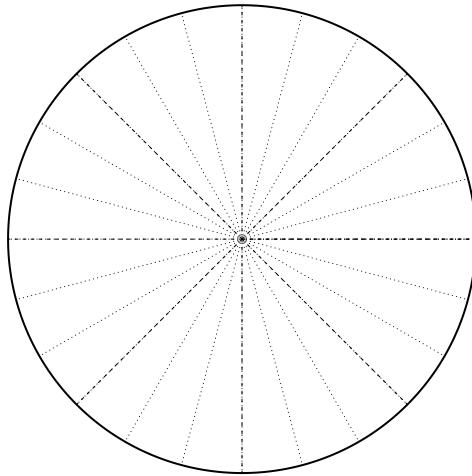
u12 Radians, Degrees, and Arc Length EXAM (version 197)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

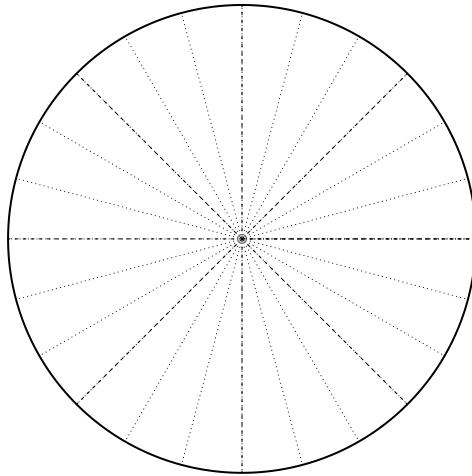


u12 Radians, Degrees, and Arc Length EXAM (version 197)

2. On the circle below, draw a sketch of a -1200° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-19\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



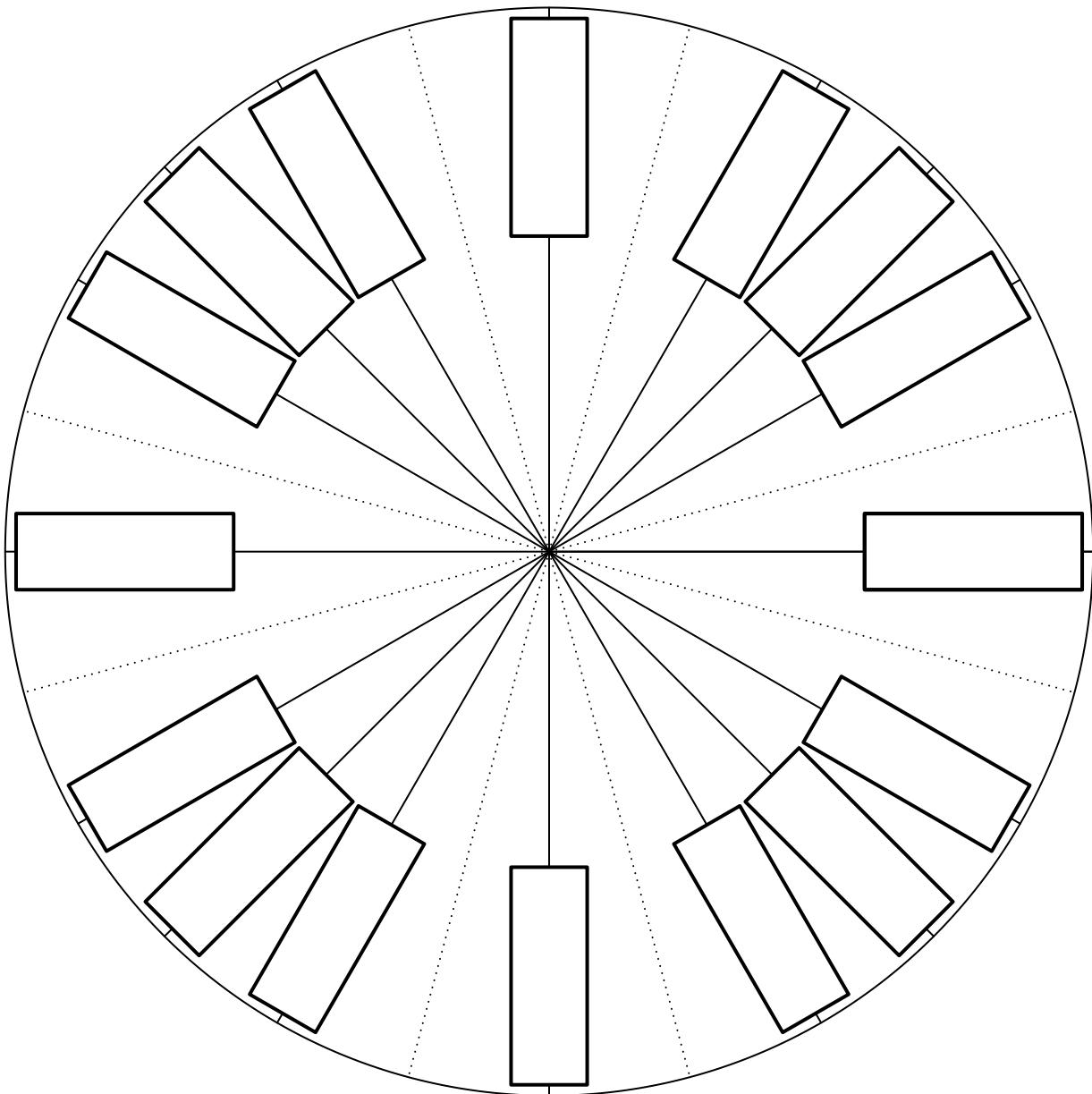
4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 2 radians. The arc length equals 12 meters. Find r .

Name: _____

Date: _____

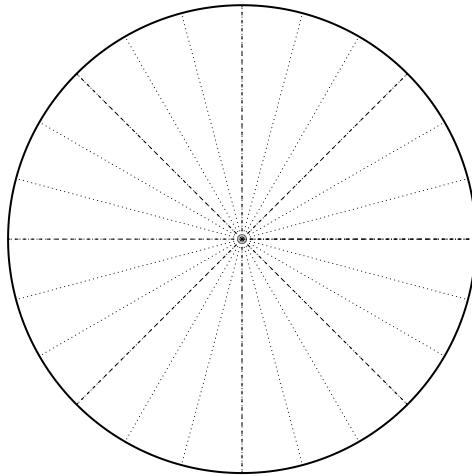
u12 Radians, Degrees, and Arc Length EXAM (version 198)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

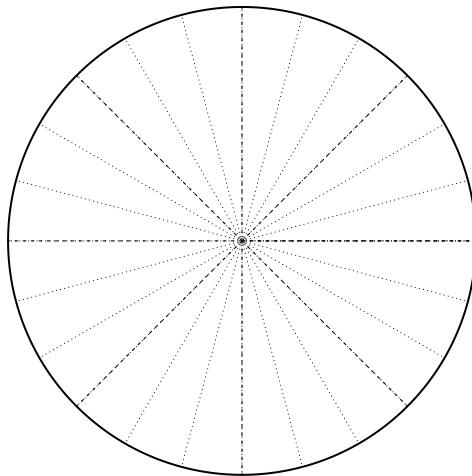


u12 Radians, Degrees, and Arc Length EXAM (version 198)

2. On the circle below, draw a sketch of a -855° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{31\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



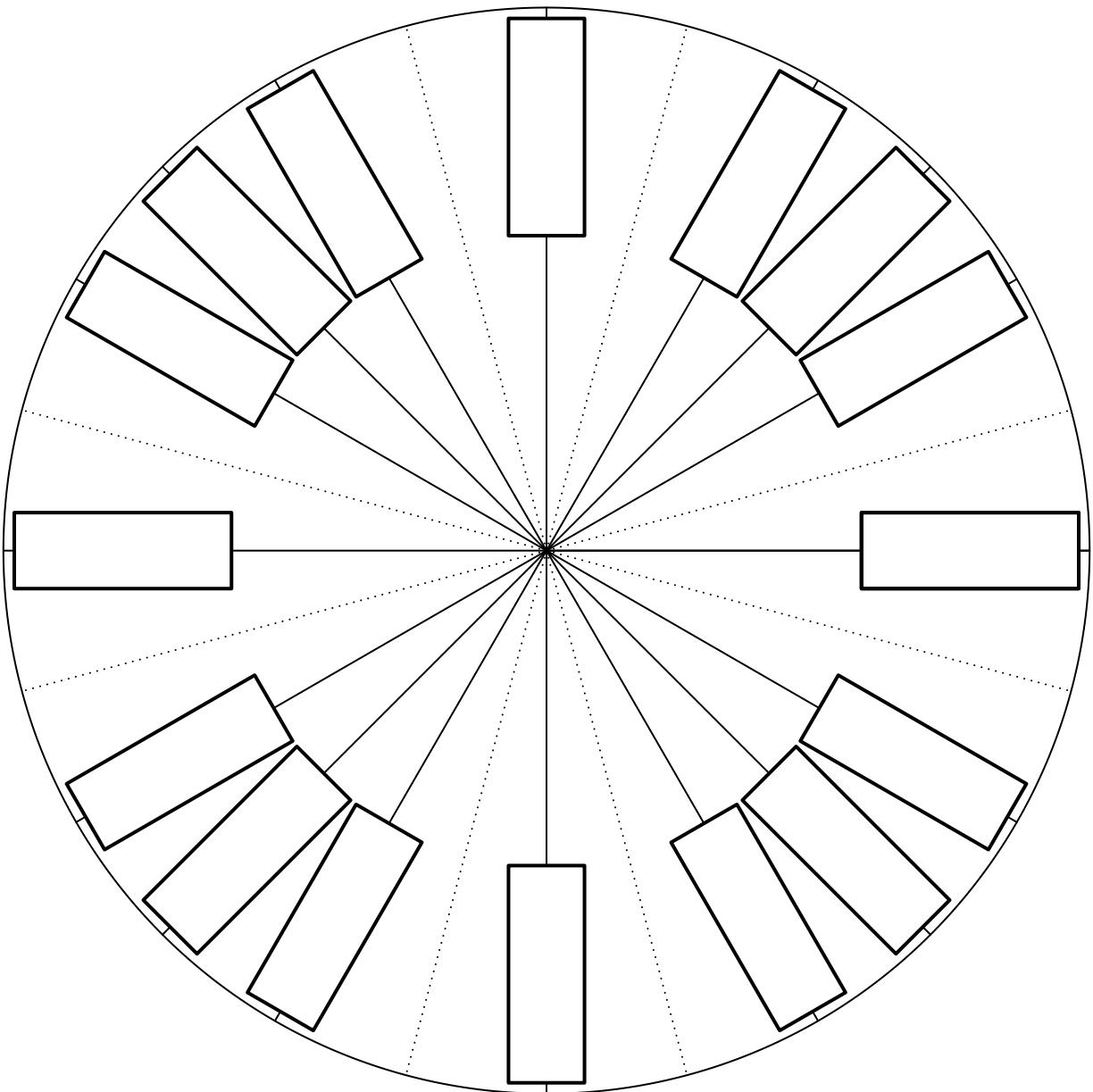
4. Imagine a circle with a central angle subtending an arc. The radius equals 3 meters. The central angle equals 5 radians. The arc length equals L meters. Find L .

Name: _____

Date: _____

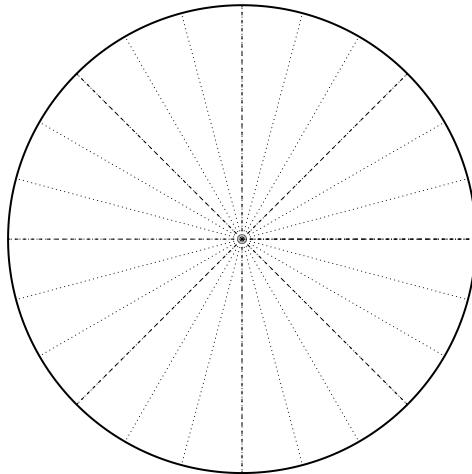
u12 Radians, Degrees, and Arc Length EXAM (version 199)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

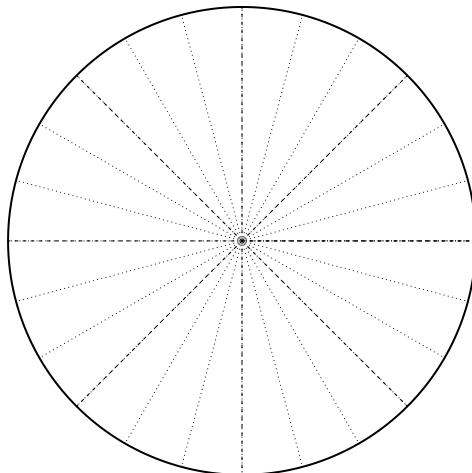


u12 Radians, Degrees, and Arc Length EXAM (version 199)

2. On the circle below, draw a sketch of a -1125° angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.



3. On the circle below, draw a sketch of a $\frac{-22\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.



4. Imagine a circle with a central angle subtending an arc. The radius equals r meters. The central angle equals 4 radians. The arc length equals 24 meters. Find r .